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Mexico's bad, mad energy plan

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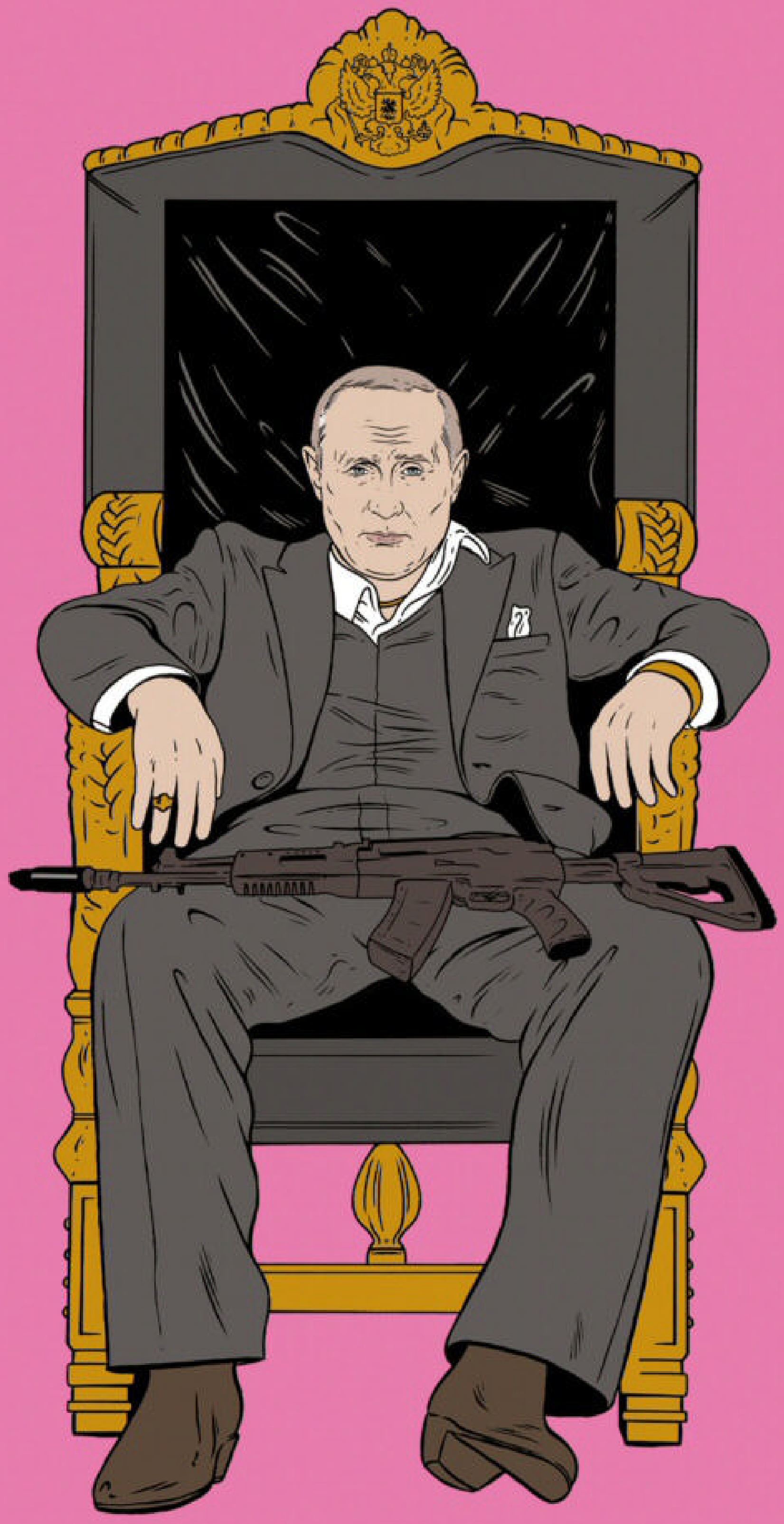

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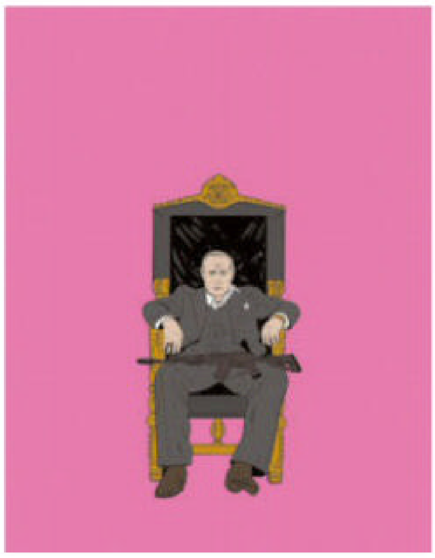

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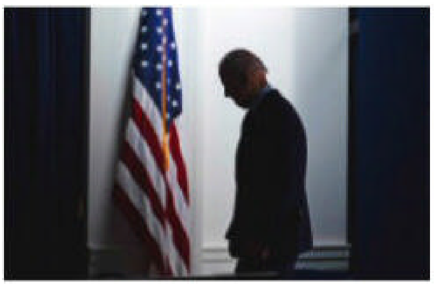

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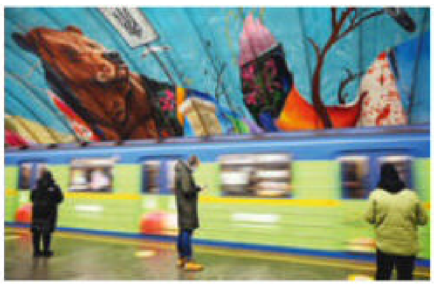

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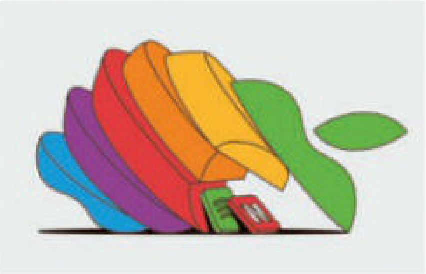

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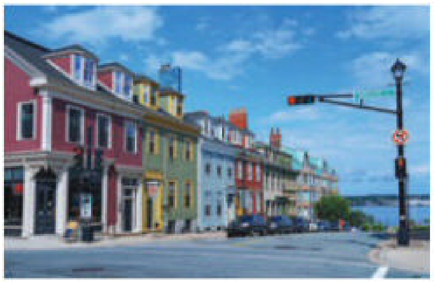

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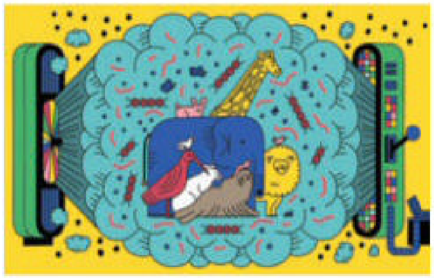

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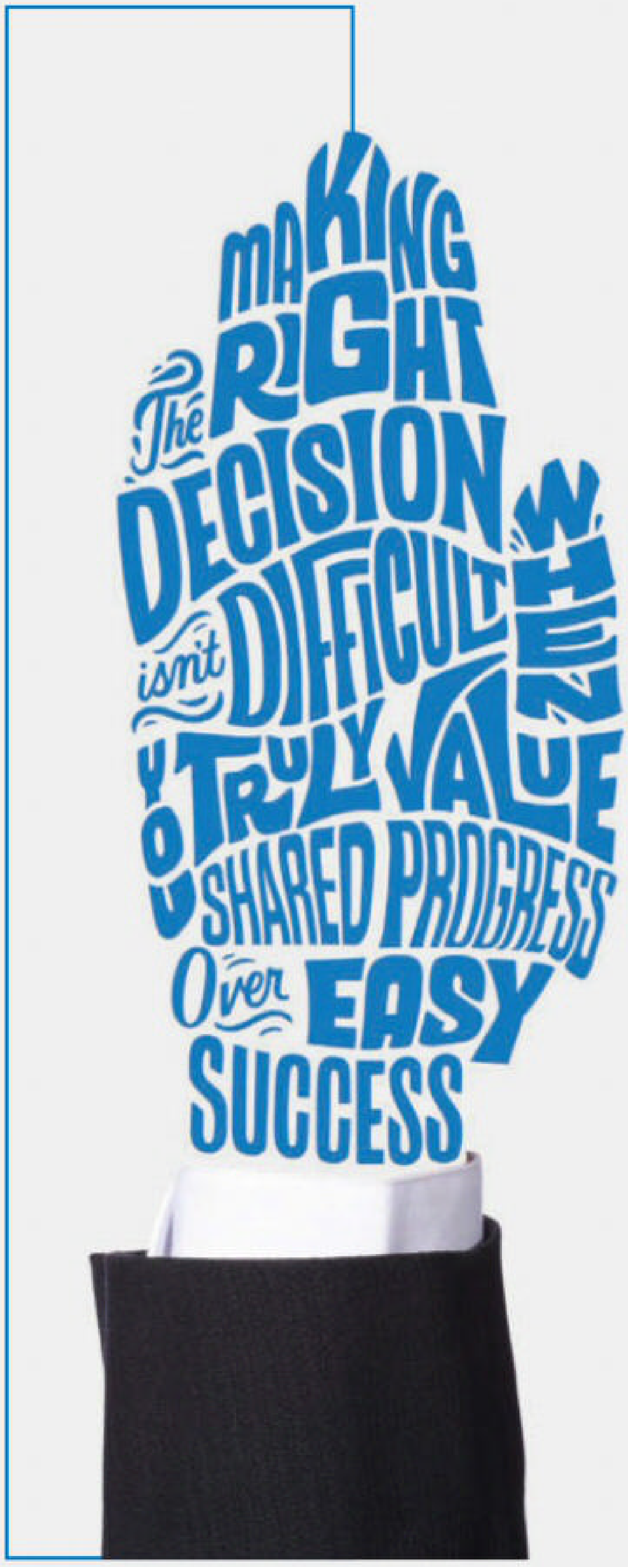
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Mayhem gripped **Kazakhstan**. Big rallies against fuel-price rises morphed into violent protests against the autocratic regime. The president, Kassym-Zhomart Tokayev, dismissed his government, but this failed to soothe tempers. Rioters burned buildings and briefly seized an airport. Without evidence, Mr Tokayev accused foreign powers of stirring unrest. He asked for help from a regional military alliance that includes Russia. Internet access was cut off.

North Korea tested a "hypersonic missile", according to the country's state media. It is the second report in recent months of North Korea testing a weapon that is more manoeuvrable than a conventional ballistic missile.

Delhi imposed a weekend curfew to slow the spread of the **Omicron variant**, which is highly transmissible but appears less deadly than previous strains of coronavirus. India, like most countries, is suffering a new wave of infections. Local governments are rushing to reimpose restrictions. Undeterred, politicians are still holding huge rallies in states that are holding elections in February and March.

Novak Djokovic, the world's best tennis player, sparked a row when he arrived in Australia to prepare for a tournament with a covid-vaccine exemption. After the government said he should be treated the same as everyone else border officials revoked his visa.

Joe Biden tried to reassure Americans that the Omicron variant should be a cause of concern but not alarm, as recorded cases in the country hit 1m in a day. His comments were somewhat at odds with those of Anthony Fauci, the White House's main covid adviser, who warned that hospitals were in danger of being overwhelmed.

Soon after he was sworn in as the new mayor of **New York**, Eric Adams faced down the main teachers' union to insist that schools remain open. The union wants a brief return to remote learning, which it says will mitigate staffing shortages caused by covid-19. Mr Adams also kept in place a strict vaccine mandate on private firms, and said it might be expanded in April to include booster shots.

By contrast, in **Chicago** classes were cancelled. The main teachers' union claims it would be unsafe to re-open. City officials accused it of ignoring the harm cancellation will do to children.

His new campaign slogan?

Emmanuel Macron summed up his covid-vaccination policy in France by saying he wanted to "piss off" people who haven't been jabbed by barring them from restaurants, shops and social events. This was preferable, he said, to jailing the unvaccinated or forcibly injecting them. Critics swooned at his coarse language and robust sentiments. But many French people agreed with him.

Italy made vaccination mandatory for everyone over the age of 50. Those who are over 50 with jobs will no longer be given the option of taking a covid test to go to work.

Stand News, **Hong Kong's** leading pro-democracy news site, was forced to shut after hundreds of police raided its office and arrested seven people. Two other media outlets also closed, citing fears for their reporters' safety. Meanwhile, 90 members of a new Legislative Council were sworn in. All but one are Communist Party supporters. "Unpatriotic" candidates (ie, critics of the party) had been barred from standing for election.

A second city in **China** was put into a strict lockdown following a rise in covid infections. Officials in Yuzhou, about 700km south-west of Beijing, vowed to quash the disease. Xi'an, a city of 13m, has been in lockdown since December 23rd. The government says it is ready to deal with any surge in cases ahead of the Chinese New Year and Winter Olympics in Beijing.

Haiti's prime minister, Ariel Henry, was shot at during an event to mark the country's independence. His office said it was an assassination attempt. Mr Henry's behaviour has not endeared him to many Haitians. In September he sacked a prosecutor who had accused him of being complicit in the assassination last year of the then president, Jovenel Moïse, which he denies. No date has been set for delayed elections.

Meanwhile, one of the suspects in the **Moïse assassination** was charged in Miami. He is one of two dozen men, reportedly former members of Colombia's special forces, who worked for a security firm in Miami and are believed to have been involved in the killing.

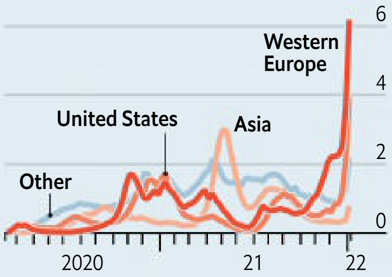
The **Canadian** government announced that it would pay C$40bn ($31.5bn) to repair the country's child-welfare system, and to compensate indigenous people who were harmed by it. It is the largest settlement in Canadian history, the culmination of lawsuits brought by First Nation groups against the government. It follows the discovery of hundreds of unmarked graves at two residential schools.

An anti-graft commission in **South Africa** said it had uncovered "a scarcely believable picture of rampant corruption" in state-owned companies during the presidential term of Jacob Zuma. Its report alleged that Mr Zuma was "directly and personally involved" in efforts to take control of state institutions and companies.

Coronavirus data

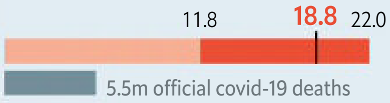
To 6am GMT January 6th 2022

Weekly confirmed cases by area, m



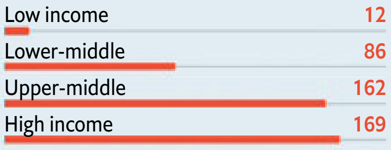
Estimated global excess deaths, m

With 95% confidence interval



Vaccine doses given per 100 people

By country-income group



Sources: Johns Hopkins University CSSE; Our World in Data; UN; World Bank; *The Economist*'s excess-deaths model

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Abdalla Hamdok, **Sudan's** prime minister, resigned, ending a power-sharing agreement between his civilian supporters and the army that was supposed to usher the country towards democracy. Thousands protested against being ruled by the generals, who have staged two coups since April 2019.

Statue of limitations

In **Britain**, a jury found four supporters of Black Lives Matter not guilty of criminal damage. They had torn down a statue of Edward Colston, an 18th-century slave trader and philanthropist, and thrown it into Bristol harbour. The statue is now in a museum. One of the four said in court that the protest was "an act of love for my fellow man". Critics of the verdict said it would encourage political vandalism.

The world this week Business

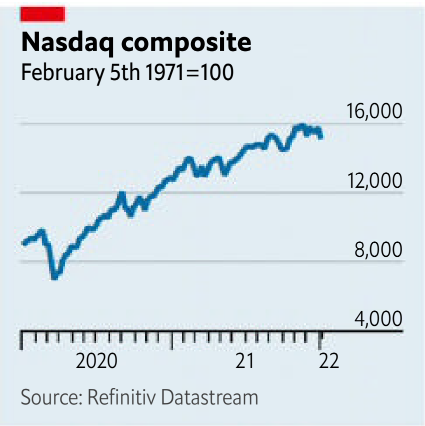
Following a three-month trial a jury in Silicon Valley found **Elizabeth Holmes** guilty of intentionally deceiving investors in Theranos, a start-up she founded that had promised to revolutionise medicine by detecting disease from just a few drops of blood. The jury was told that Ms Holmes knew that the firm's core technology was faulty, and lied about its prospects. At Theranos's zenith, in her black turtlenecks giving a TED talk, Ms Holmes symbolised the self-assured culture of tech startups. She will be sentenced later.

Erdogan's folly

Turkey's annual inflation rate soared in December to 36%, up from 21% the previous month. The country's currency has slumped, falling by 44% against the dollar in 2021, mostly as a result of Recep Tayyip Erdogan's unorthodox economic policy of badgering the central bank to cut interest rates. All this has only fuelled inflation in Turkey, which is dependent on imported energy and goods. The cost of transport was up by 54% in December, year on year, and food and drink by 44%.

Toyota sold more cars in the United States than **General Motors** in 2021, the first time that GM has lost the annual crown of America's biggest carseller since the early 1930s. The Detroit giant was hit particularly hard by the global shortage of computer chips, causing it to curtail production sharply. Its Japanese rival had stockpiled chips, leaving it ready to take advantage of rising demand for new cars when pandemic restrictions eased. Toyota says it does not expect to be America's king of the roads in 2022.

Tesla was also able to overcome the crunch in chip supplies, almost doubling its deliveries of cars in 2021 in part by ramping up production in China of vehicles for the Asian and European markets. The electric-car maker's good news was somewhat overshadowed by the criticism it received for opening a showroom in Xinjiang. One civil-rights group said that Tesla was "supporting genocide" in the Chinese region, where the Uyghur population is persecuted by the government.



Nasdaq composite

February 5th 1971=100

Source: Refinitiv Datastream

With investors adjusting to expectations of a faster pace of interest-rate rises, **stockmarkets** had a wobbly week. Tech stocks were hit hard; the Nasdaq had its worst start to a new year since 2008. Shares in airlines and the wider travel industry fared better as fears receded that Omicron would shut borders again. Last year also saw a few frights in the markets, but overall the S&P 500 was up by 27% over the 12 months, the Nasdaq by 21% and the Dow Jones Industrial Average by 19%. In Europe the Stoxx 600 ended December 22% higher than when it opened in January.

Apple became the first company to reach $3trn in market capitalisation. It was a brief moment, as its value fell back amid the rout in tech stocks. The company's share price has more than tripled since the depths of the pandemic in March 2020.

Having been booted off the New York Stock Exchange amid America's prohibition on investments in certain Chinese companies, **China Mobile** made its debut on the Shanghai stockmarket, a secondary listing to Hong Kong, where its shares also trade. It is one of the biggest ever share offerings in China, which may raise close to $9bn once all the options are exercised.

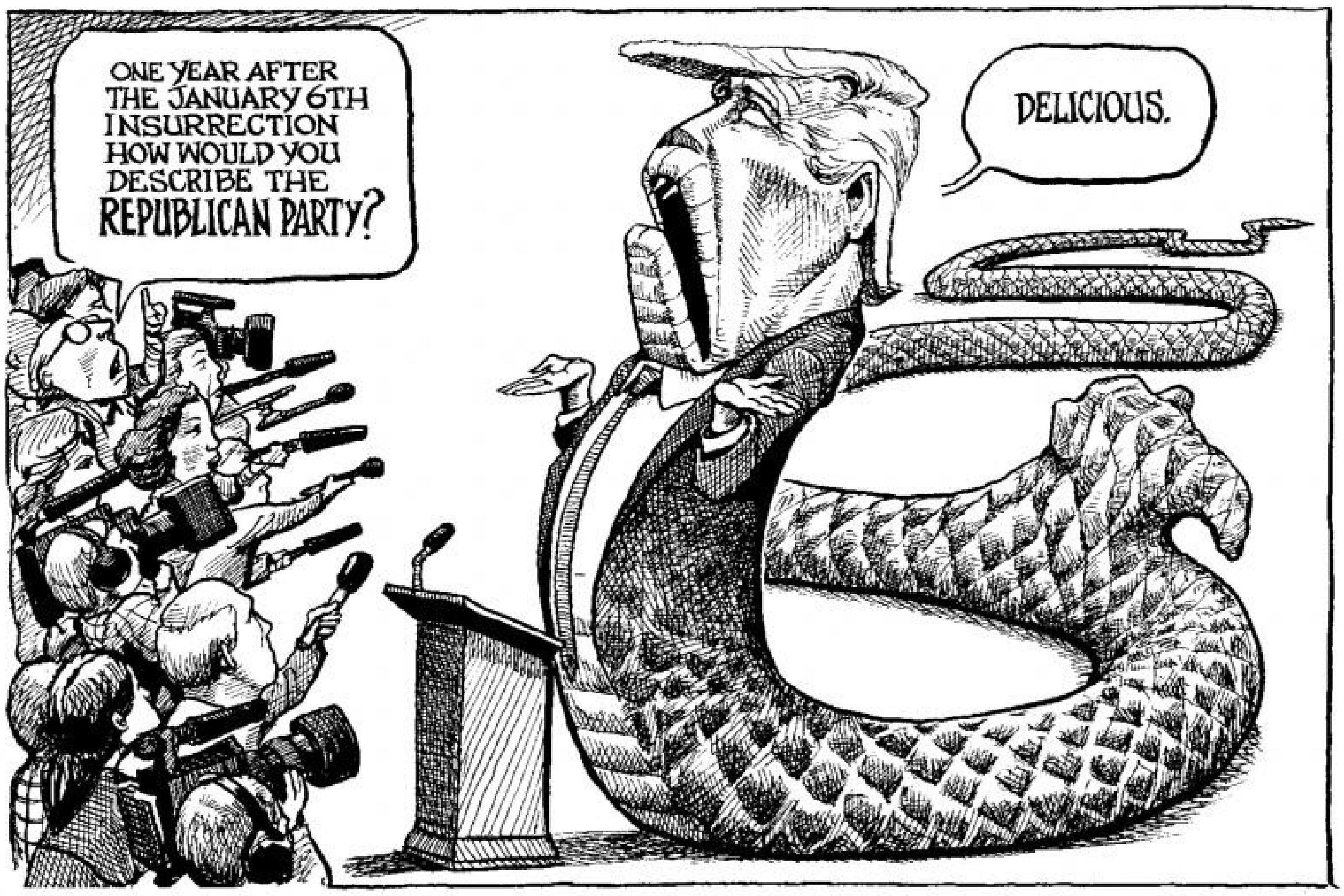
Meanwhile **SenseTime's** stock roared ahead following a successful IPO on the Hong Kong exchange. The Chinese company develops facial-recognition software. Last month it was blacklisted by the Biden administration because its technology allegedly enables human-rights abuses in Xinjiang, a claim which SenseTime says is "unfounded". The blacklisting forced a short delay to its IPO, which was relaunched with the help of several state-backed institutions in China.

Huawei said it expects last year's revenue to top $99bn, a drop of 30% from 2020. The Chinese maker of telecoms equipment did not give details, but the decline undoubtedly reflects American and foreign bans that cut its access to chips using American technology.

The crisis deepened at **Evergrande**, as the debt-laden Chinese property developer confirmed it had been ordered to demolish 39 buildings on a man-made island that it has compared to the Palm Jumeirah in Dubai. The local authority in Hainan province said Evergrande had not been given permission to build the properties. Trading in its shares was briefly suspended in Hong Kong ahead of the announcement.

Dollar days

Warner Music snapped up the rights to **David Bowie's** catalogue of songs, reportedly for $250m. It is the latest deal for the lucrative library of a rock star's melodies; last month Bruce Springsteen sold the rights to his tunes to Sony Music for a reported $550m. The buyers get a steady income from licensing the tracks for radio, and increasingly, streaming services.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How to talk to Mr Putin

Russia's aggression towards Ukraine has created a chance to enhance the security of Europe

It is usually a bad sign if talks start with one side brandishing a gun. And so it may prove when Russian diplomats meet their North American and European peers next week, backed by 100,000 troops poised to invade Ukraine. At stake is the future of a country that increasingly sees itself as part of the West, as well as America's role as the anchor of European security. As the crisis comes to a head, the risk of miscalculation is growing.

Russia's president, Vladimir Putin, has already issued his demands for the talks, which will kick off between Russia and America in Geneva on January 10th, move to Brussels for the NATO-Russia Council two days later and wrap up at the Organisation for Security and Co-operation in Europe on January 13th. Mr Putin wants NATO to forswear all further expansion—everywhere, and not just in Ukraine and Georgia, two former Soviet states. America must no longer protect its allies with tactical nuclear weapons and short- and medium-range missiles. And Russia wants, in effect, a veto over troop deployments and exercises in the eastern parts of NATO territory and over military co-operation with all former Soviet countries.

Many of these demands are so extravagant and so detrimental to Europe's security that they may really be an ultimatum drafted to be rejected, creating a pretext for another invasion of Ukraine (see Briefing). If Mr Putin is indeed bent on going to war, he will. However, robust diplomacy could yet give him pause and help stop the long decay of relations between Russia and the West. Even if talks fail, NATO could emerge stronger, more united and clearer about the threat it faces.

Be in no doubt that Mr Putin has brought on this crisis. Perhaps he wants Ukraine to fail because, were it to become a thriving democracy, it would stand as a rebuke to his claim that Western values are unworkable in Orthodox, Slavic Russia. He may also intend to divide and weaken NATO as well as to create an enemy abroad so as to justify repression at home—as with Memorial, a civil-rights group, shut down just before the new year on the trumped-up charge of being a "foreign agent". And Mr Putin has come to regret the security arrangements that Russia freely signed up to after the cold war. Today, he believes, Russia is stronger and America is declining and distracted by the challenge from China. For whatever reason, he seems in a hurry to establish his legacy by renewing Russia's sphere of influence.

Some things are in his favour. He has the aggressor's advantage, controlling the timetable and the scope of an attack, should there be one. Everyone knows that Ukraine matters more to him than to any NATO country, which means that the West will not send troops to defend it.

But not everything is going his way. Ukraine is as populous as Iraq. Although Russia's forces should be able to defeat it in battle, holding swathes of territory there could come at a high price, especially if the Ukrainians mounted an insurgency. And in Kazakhstan, on Russia's southern border, Mr Putin is being asked to help crush a popular uprising—a distraction and awkward proof of his willingness to oppress (see Asia section). For these reasons, he may have to curb his ambitions and, say, seize enclaves around Donetsk that are already controlled by Russian-backed irregulars, or establish a land bridge to Crimea, which he annexed in 2014. His doubts about how far to go can be exploited.

Mr Putin's other problem is that his aggression has united NATO and given it new purpose. His ultimatum, combined with his willingness to see prices of Russian gas surge in Europe in 2021, has cut the ground from under those arguing for closer ties to the Kremlin. America has helped galvanise Europeans, by sharing detailed intelligence about huge numbers of troops massing near the Ukrainian border.

The West should have two objectives in next week's talks: to deter war in Ukraine if possible, and to enhance European security. Stopping a Russian invasion involves the threat of severe economic sanctions, as well as aid and defensive weapons to help make Ukraine indigestible. At the same time, the West can seek to reassure Mr Putin by clearly stating that, although Russia has no formal veto over who joins NATO, neither Ukraine nor Georgia is about to become a member.

Done right, the second aim, of enhancing Europe's security, can also lower tensions over Ukraine. Although some Russian demands would leave Europe vulnerable, others could be the basis for talks that benefit both sides. Consider a regional agreement about the deployment of missile forces or confidence-building measures to make exercises less threatening. There is no shortage of things to discuss, from the Arctic to cyber-security, to new missile technologies. Negotiations would be drawn-out, such is the mistrust between the two sides, but that might be no bad thing, because they could turn into a useful forum.

The question is not whether such talks are possible—they are clearly in Russia's interest—but whether Mr Putin really wants them. He has often behaved as if Russia's security depends on making the West feel less safe. However, negotiations would enhance his status as a world leader. By circumscribing the domains of military competition, they might also help him cope with the fact that Russia cannot begin to match the combined resources of the West.

The profound doubts about Mr Putin's real intentions mean that, even if talks begin, NATO needs to demonstrate that it is prepared to defend its members. The most vulnerable are the Baltic states. After Russia seized Crimea, NATO's western powers started to rotate more troops in the east. Because of Russia's threats, credible preparations for enhancing those rotations ought to begin immediately. Even if Ukraine is not about to join NATO, Russia is driving Sweden and Finland towards membership. The alliance should be ready to welcome them. Throughout, America should ensure that deals are never struck above European countries' heads: that is Russia's style.

Mr Putin says that his country is threatened. It is not. NATO is a defensive alliance. Even after Crimea, it has held back from putting permanent combat forces into eastern Europe. The real threat is Mr Putin. When he issues his demands down the barrel of a gun, it should stiffen the resolve both of the West and of the resilient Ukrainians to deter and resist him. ■

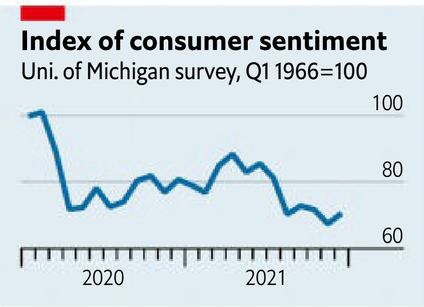
Lowering inflation

Beware snake oil, Mr President

Democrats seem dangerously drawn to schemes to limit the growth in prices

RAPIDLY RISING prices are as conspicuous as they are unpopular. Annual inflation of 6.8% has left American consumers even more anxious about the economy than they were during the pandemic-induced crisis in the spring of 2020. They are gloomy (see chart), even as many of them enjoy rising incomes, bargaining power over their employers—the result of a labour shortage—and soaring house prices (see Finance & economics section). Their unease is a problem for President Joe Biden, whose economic management does not poll well. By one count, over two-thirds of voters disapprove of his record on inflation.

The White House is therefore now keen to fight the rise in prices. But Democrats are slipping into a bad habit that often afflicts politicians at such a moment: blaming greedy corporations and rigged markets instead of their own flawed policies. It is a recipe for more mistakes.



Over the past year corporate profit margins have surged as the economy has recovered. Elizabeth Warren, a senator, says that this shows how businesses have exploited the pandemic to “gouge” consumers; Mr Biden’s press secretary has castigated firms for “jacking up prices during a pandemic”. The administration thinks that antitrust enforcement can help control price growth. On January 3rd Mr Biden unveiled plans to increase competition among slaughterhouses, which he blames for a 16% rise in meat prices in the year to November. He has also called for investigations into the energy and shipping industries, the sources of recent shortages and bottlenecks.

Scrutinising concentrated markets may be a good idea, but it will not do much to fight inflation. It is absurd to think that corporations became more greedy over the past year or that markets are suddenly less competitive. Prices have accelerated in part because Mr Biden’s excessive economic stimulus led to a surge in spending on physical goods at a time when the pandemic had already bunged up global supply chains. History shows that companies’ profit margins are a poor guide to inflation. In the mid-2010s, when inflation languished beneath the Federal Reserve’s 2% target, they were almost as high as they are today. In the late 1960s, as inflation took off, they fell steeply.

The danger of misdiagnosing the cause of inflation is that it eventually leads not just to irrelevant policies but to damaging ones. One risk is price controls. The Roosevelt Institute, a left-wing think-tank, has called for the federal government to “regulate and negotiate” more prices. Isabella Weber, an economist at the University of Massachusetts Amherst, wants “a systematic consideration of strategic price controls”. Both point to high corporate profits to support their arguments.

As America learned when President Richard Nixon froze prices and wages in 1971, controls would distort the economy and harm growth while at best delaying inflation. Today’s advocates tend to call for surgical interventions rather than across-the-board freezes, but it is naive to think that the bureaucracy could make a success of micromanaging the price mechanism.

It may seem far-fetched to think that politicians would resurrect policies that had been so thoroughly discredited. But consider that another plank of America’s hapless inflation-fighting in the 1970s, under President Gerald Ford, was “the vigorous enforcement of antitrust laws”. Then, as now, the government’s eagerness to pin the blame on businesses inspired bad ideas.

The uncomfortable truth for Mr Biden is that the Federal Reserve, not the White House, controls the tool to bring down inflation: higher interest rates. The government could help cool the economy by cutting spending or raising taxes. But belt-tightening, unlike bashing corporations, is unpopular. Politicians’ unwillingness to do what is necessary to fight inflation is why central banks are independent—and why it is good news that the Fed looks as if it will raise rates as soon as the spring. ■

Mexico

High-voltage mire

Congress should reject President Andrés Manuel López Obrador’s dirty, costly energy policy

MEXICO’S PRESIDENT gets many of his ideas from the 1960s and 1970s. Back then Mexico had yet to embrace economic liberalisation or democracy, and state-owned energy companies dominated the economy. As a young politician, Andrés Manuel López Obrador watched Pemex, the oil giant created by nationalising private firms in the 1930s, spread largesse around Tabasco, his home state. Mexico has changed a lot since those days, as has the energy business. Mr López Obrador’s thinking has not.

Since becoming president in 2018, Mr López Obrador has repeatedly tried to recreate that antiquated model of state-led and fossil-fuel-powered energy. He has pumped public money into building a refinery in Tabasco, at a cost of at least $8bn, and into propping up the ailing Pemex. His latest attempt to turn back the clock is a constitutional amendment which, if passed, will hand back control of the electricity market to the state-owned electricity company, CFE (see Americas section). It would be a disaster for the country.

Mexico opened up its oil and power industries timidly in the 1990s and then more boldly in the 2000s—an admission that, without private investment, it could not keep up its oil output or provide adequate, affordable power. A series of presidents tried to liberalise energy markets; Mr López Obrador’s predecessor,

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Enrique Peña Nieto, at last succeeded. Lawmakers from both the ruling and main opposition parties voted for change.

The reforms worked. Electricity became cheaper for those firms able to buy on the open market. Pemex benefited from outside expertise in exploiting its reserves. Cheaper energy, in turn, helped Mexico's manufacturers flourish. This meant that the economy, and the government, were no longer dependent on oil rents. Better yet, renewable energy firms, like the tourists on the beaches of Cancún, thronged to soak up Mexico's plentiful sunshine. They also came to harvest its wind. A country steeped in hydrocarbons was joining the global shift to clean energy.

Mr López Obrador's plan is designed to reverse these successes, after earlier attempts were rebuffed in the courts. He says that strengthening CFE and Pemex would benefit the Mexican people. It is hard to see how. If the bill is passed, power will cost more. It will also be dirtier, as electricity generated by CFE will take priority over the largely cheaper and greener stuff mainly produced by private firms. Independent regulators will be scrapped. Private generators will no longer be able to sell power directly to big consumers, but only to CFE, on its terms.

All this would lead either to big price rises or to a burden on the public purse. Mexico would almost certainly miss its climate-change goals. Its credibility with investors would also be battered, as many energy contracts would be cancelled.

The reverberations would be felt throughout the economy. Multinational manufacturers, lured by Mexico's trade deal with the United States and Canada, would at the very least face higher power bills, threatening the profitability of some operations. Others have pledged to reduce their greenhouse-gas emissions; running a factory using power produced by burning dirty fuel oil would not help with that. And the sense that the rules in Mexico are liable to change at the president's whim will do little to attract investors already sceptical that a left-leaning populist will treat them fairly or predictably.

All this comes at a time when Mexico is emerging from its biggest economic contraction since the Depression. The country needs all the investment it can get. It should be seizing the huge opportunity presented by America's decoupling from its great East Asian rival. Many firms that cater to American customers are looking to shorten their supply chains and reduce their reliance on China. Mexico could attract many such firms, but only if the president does not scare them off.

Mr López Obrador's proposals are also legally iffy. Lawyers reckon the bill breaches trade deals, including the one with the United States on which so much of Mexico's manufacturing is based. The voiding of contracts will raise tricky legal questions about compensation.

And if Mr López Obrador succeeds in abolishing two independent energy regulators, he is likely to redouble his attacks on institutions that he does not yet control. These could even be focused on the body that administers Mexico's elections, a frequent target of his. It seems the president's conception of the state is also mired in the 1970s, when Mexico was ruled by a single party and the executive faced no meaningful checks on its power.

Mexico's Congress should vote down his proposals, which will be debated from January 17th. Beyond that, though, lawmakers should try to rein in both the president's nationalistic tendencies, which will endure long after this bill, and his attempts to undermine the rule of law. This will not be easy. Mr López Obrador is one of the most popular leaders in Latin America. He is also one of the most stubborn. ■

Politics in Hong Kong

Pliant patriots

Hong Kong's new legislature has been sworn in. It is a mockery of democracy

"Democracy in Hong Kong is flourishing." These words, used by the Chinese Communist Party in a recent white paper, suggest a strange definition of democracy. On January 3rd lawmakers newly elected to the territory's Legislative Council took their oaths. Not since long before China regained control of the former British colony have the body's members been more pliant. All but one of the 90 councillors are party supporters. China made sure of that.

In elections in December, only "patriots", meaning the party's cheerleaders, could stand. The opposition was in tatters anyway. Many of its politicians were in jail, or heading there, for their roles in demonstrations in favour of real democracy that engulfed the territory in 2019. Most of those still free decided to shun the rigged polls. Turnout was at a record low.

The past few days have seen other reminders of how swiftly and dramatically Hong Kong has changed since the party began tightening its grip there in 2020. Police have arrested the editors of a popular pro-democracy news website and charged two of them with sedition (see China section). The portal has shut itself down. Two similar outlets have followed suit to protect their staff. The University of Hong Kong has removed a statue commemorating the massacre of protesters in Beijing in 1989. "Flourishing" used to be a good word to describe Hong Kong's political spirit. A better one now would be "crushed".

Under British rule, Hong Kong was hardly democratic either. The governor was a Briton sent from London. When China took over, only one-third of legislators were directly chosen by popular vote. China fed hopes for reform, promising in the constitution for the territory that the "ultimate aim" was "universal suffrage". But it never meant that critics of the party could take control. The explosion of discontent in 2019 prompted China to impose a draconian national-security law that quashed dreams of free elections. With hindsight, after the British withdrew, the main surprise was how long Hong Kongers managed to carry on enjoying so many freedoms abhorred by China.

The Communist Party wants the new legislature to drive even more nails into democracy's coffin by passing another security-related law. This yet-to-be-drafted bill is commonly known as Article 23, after a clause in Hong Kong's constitution that requires the territory to adopt its own legislation concerning crimes such as treason, secession, sedition and subversion.

Why bother, when the national-security law already covers much of that ground? Chillingly, Hong Kong's security chief, Chris Tang, says there "may still be gaps that need to be filled". China, it seems, wants no loophole for political dissent. Never mind that public fear of such legislation sparked a huge protest in 2003 and deterred officials from pursuing plans to get it passed. There will be no wavering this time.

In part to show disapproval of the clampdown, America and some allies have declared a diplomatic boycott of next month's Winter Olympics in Beijing. They will send athletes, but not official envoys. That is appropriate, but it will not change China's behaviour. The party sees pro-democracy activism in Hong Kong as a threat not only to stability there, but to its rule in Beijing.

The white paper is the latest broadside in China's campaign to redefine democracy and portray the party as its torchbearer and Western versions as a sham. Only now that Hong Kong's legislature is freed from gridlock, the party says, and the government is unfettered by mayhem, can real democracy flourish.

Some businesspeople will shrug. But the debauching of democracy also threatens things they see as vital to Hong Kong's prosperity: legal independence, regulatory fairness and corporate transparency. Firms should worry about the gradual erosion of these principles. Witness, for example, China's tirades against the Hong Kong Bar Association's outgoing chairman, who has criticised the national-security law, and the government's takeover of some powers from a previously self-regulating accountants' body. As independent institutions, bit by bit, fall under the party's sway, Hong Kong becomes ever more like the mainland. "Prospects are bright for democracy in Hong Kong," intoned the white paper. On the contrary, a pall has been cast over a once-vibrant city. ■

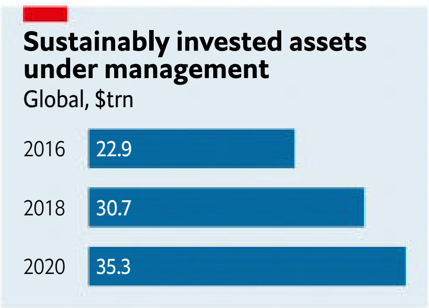
Climate finance and greenwashing

The meaning of green

Europe's new labelling scheme is not the way to get capitalism to tackle climate change

INVESTORS' ENTHUSIASM for financing the green transition is growing—just look at the surge of interest in the electric-car industry. Tesla's shares rose by 50% in 2021; those of CATL, China's battery giant, rose by 68%. Yet if you look more closely, you will find huge problems. If the world is to reach net-zero emissions by 2050, investment will need to more than double, to $5trn a year. And fund management is rife with "green-washing". Sustainability-rating schemes have proliferated but are wildly inconsistent, while many funds mislead investors about their green credentials.

To the rescue has come the European Union, which has devised a new labelling system, or taxonomy, that sorts the economy into activities it deems environmentally sustainable, from the installation of heat pumps to the anaerobic digestion of sewage sludge. The idea is that funds and firms will use this to disclose what share of their activities qualify as green, and that clarity will help unleash a flood of capital from markets. The proposals have been in the works for years, and on December 31st the European Commission circulated its latest thinking.



Countries have different energy sources, so the exercise was bound to be political. Still, the classification looks sensible. Labelling nuclear energy as green—subject to conditions including the safe disposal of toxic waste—has been met by howls from the Green party in Germany (see Europe section). But nuclear can play an important part in getting to net-zero; indeed, by deeming it green only during the transition, the taxonomy is, if anything, too timid. The plan to label natural gas as green has been controversial, too. But the rules reflect a hard-headed assessment that it will be a vital transition fuel in the next decade. They treat gas projects as green for a limited period, if they replace dirtier fossil fuels, receive approval by the end of the decade and contain plans to switch to cleaner energy sources by 2035.

The plan's flaws lie in its bureaucratic outlook. The simplistic nature of the labelling may lead to a purity test in which funds exclude assets that are dirty. In fact a key job of capital markets is to own polluting companies and manage down their emissions. The classification is static, whereas changes in technology will cut the carbon-intensity of some activities and lead to inventions the classifiers have not envisioned. It fits a pattern of European climate-finance ideas that are well-meaning but marginal, including using the European Central Bank to buy green bonds (which could overstep its mandate), and imposing green "stress tests" on banks, even though the lifespan of their assets is shorter than the horizon for the most devastating climate change.

What else to do? The goal should be to make it easier for investors to track the carbon emissions of their portfolios (today this is hard to do accurately). Funds with zero emissions would be virtuous, but those that cut their footprint fast might be even better. This will require new disclosure, so that investors can track emissions and avoid double-counting across supply chains. Such a system would be simpler to administer, and ask less of countries that struggle to agree on what counts as green. A new global green-disclosure body has been set up but it needs to act faster.

The EU's broader aim should be to use carbon pricing to alter how capital is allocated. Relying on investors to save the planet using a taxonomy has obvious limits. Less than a third of global emissions stem from firms that are publicly listed and controlled by institutional investors. And investors do not have a clear incentive to be green. If you don't mind the stigma, owning polluting assets can be profitable, which is why they are increasingly held privately.

By contrast, putting a price on carbon sends a signal that reaches across the whole economy, not just into listed firms, and fully aligns the profit motive with the objective of cutting emissions. The EU's main carbon-pricing scheme is the rich world's largest but, although work is going on to expand it, it covers only 41% of emissions. If the EU wants to lead the world by unleashing the power of finance to combat climate change, the carbon market is where it should be focusing its efforts. ■

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Stopping invasions

I was surprised that your briefing on American foreign policy, which characterised the global order created after the second world war as "breaking down", did not mention the UN charter ("A weary superpower", December 11th). The charter, the legal bedrock of the post-war order, says that UN member states "shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state."

Your thoughtful discussion spoke of an uncertain path ahead amid global menaces. Two of them stand out in particular: the threats being made by China to the territorial integrity of Taiwan (which is surely a state under international law) and Russia's threat to Ukraine. In those cases the refusal of American politicians to consider war to defend the victimised countries and vindicate the charter's most important rule would suggest that America has conceded a basic premise upon which the post-war order was founded. Acquiescence in Russia's annexation of Crimea carried America a step down that dangerous path.

If countries no longer respect or demand adherence to the UN charter's prohibition of the use of force, our world is in deep trouble.

CHRIS BORDELON
Philadelphia

You encouraged more American and Western military engagement to make the world safer. With respect, you must be insane. Such thinking belongs in the pre-nuclear weapons era. American involvement defending Ukraine against Russia or Taiwan against China, however morally worthy, would increase the risk of nuclear weapons being deployed by Russia or China at the urging of nationalistic hawks within those countries. Once the first weapon is used, the next steps become wholly unpredictable and potentially catastrophic for our civilisation. Just because no nuclear missiles have yet been launched does not mean that they never will be.

Russia has made it clear that buffer states are an essential part of its defence strategy if not national identity, a principle that NATO seems unable to understand. China, similarly, is not about to give up its claims to Taiwan. Neither of these perspectives will be changed by the threat of Western hard power. On the contrary, militaristic Western threats could rally nationalistic feelings in Russia and China. Even more so if Donald Trump's finger is once again on America's nuclear button.

MICHAEL WELLS
Gullaug, Norway

Connections

"Seeding the cloud" (December 4th) claimed that the digitalisation of Africa will be grounded in fibre, steel and concrete. This misses a critical element in the goal to create a truly connected Africa. The challenge to deliver reliable internet connections to existing users while providing new connections to the almost 350m Africans who have no connection is multidimensional. It will require a combination of the infrastructure you mentioned with technologies such as satellite, cellular, software-defined networking and renewable energy (solar power) to bring reliable access to cloud-based applications. Fibre, steel and concrete will only get Africa so far.

STEPHEN SPENGLER
Chief executive
Intelsat
McLean, Virginia

Who is an African?

The appointment of Africans to lead international organisations is hopefully a growing trend ("Africans at the top", December 11th). There is, however, a very important point in regards to African identity. You mentioned Ngozi Okonjo-Iweala's leadership of the WTO as one of several recent sub-Saharan African appointments to top jobs. However Audrey Azoulay, a Moroccan Jewish woman, has been director-general of UNESCO since 2017. Given the importance of promoting education, the role of women and preserving cultural heritage in Africa, it is a big deal. This may also highlight an uncomfortable racial expectation of what it means to be African.

Elon Musk, born among the jacaranda trees of South Africa, is one of the most influential Africans in the world. He hasn't only broken a glass ceiling, he is changing the way we live our lives. Barack Obama, a man of Kenyan heritage, broke the highest glass ceiling of them all in recent memory. It is the very international organisations to which you refer that have promoted the misconception that Africa is racially homogeneous.

ZAID BELBAGI
Casablanca, Morocco

Cruising homes

Your article on seasteading told us about a company that wants to build floating districts that can be comfortable and affordable ("A stop in the ocean", December 4th). Such entities already exist; they are called cruise ships. One could reconfigure a mega-ship by knocking together several smaller staterooms into suites and selling them as condominiums. The ship would have all other facilities: housekeeping, several restaurants, entertainment, exercise and banking facilities and even some health care. Such a vessel could call itself the independent nation of Waterworld and moor in international waters, moving around to visit nice places. At each destination its citizens would be conveyed from the ship to the port for land excursions, but never staying in a country long enough to be subject to taxation. This model is scalable to cruise ships that would be bigger than today's vessels, which are limited in size because of the constraints of navigating ports and canals.

AVINASH DIXIT
Princeton, New Jersey

The joy of eating out

Focusing on an economic history of restaurants ("The pleasures of the table", December 18th) omits a lovely service that restaurant staff provide: the one smiling face a person might see all day. Many benefits are enjoyed when renting the real estate of a table for an hour or two, such as enjoying food we would never take the time to prepare, but also the graciousness and courtesy of a person who devotes his or her energy to making us feel better. Restaurants provide a vital key to mental health.

LINDA NAKAMURA
San Francisco

Christian Lacroix's glittering production of "La Vie Parisienne" at the Théâtre des Champs-Élysées this Christmas reminded me of one of the reasons why gentlemen went to restaurants in the 19th century: they could entertain women who were not their wives. Parisian restaurants such as the Café de Paris were famous for their private rooms, including the number 16, to which Offenbach pays such lyric tribute in "La Vie Parisienne". Over time it became acceptable to take one's own wife out to dinner.

DAVID CHAFFETZ
Lisbon

You say potato…

I take issue with a reader's assertion, in relation to a lyric by Stephen Sondheim, that "grass" rhymes with "ass" (Letters, December 18th). In Britain grass is pronounced "grarse" (in southern England at least), and hence rhymes perfectly with arse.

He had clarse, did Mr Sondheim.

DAVE LE BRUN
Wotton-under-Edge, Gloucestershire

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Putin's brinkmanship

Russia's menacing of Ukraine is unlikely to induce NATO to retreat. It may have the opposite effect

As the cold war reached its denouement three decades ago, the West was careful to temper its elation with magnanimity. "I have not jumped up and down on the Berlin Wall," President George H.W. Bush pointed out to Mikhail Gorbachev, the last Soviet leader, at a summit in Malta in 1989. Months later James Baker, America's secretary of state, delivered an assurance to Mr Gorbachev in Moscow: "If we maintain a presence in a Germany that is a part of NATO...there would be no extension of NATO's jurisdiction...one inch to the east." Even as the Soviet Union crumbled in 1991, John Major, Britain's prime minister, repeated the pledge. "We are not talking about strengthening of NATO," he said.

Yet strengthened NATO was. In 30 years the alliance has expanded more than 1,000km to the east of the former front line dividing Germany. A bloc that once shared only a slender border with Russia, in Norway's northern fringes, now encompasses the Baltic states, former Soviet territories within 200km of St Petersburg and 600km of Moscow. Seven of the eight former members of the Warsaw Pact—the Soviet Union's answer to NATO—have become part of NATO (see map). At a summit in Bucharest in 2008, America persuaded the rest of NATO to declare that Ukraine and Georgia "will become" members—a promise reiterated last month.

For Vladimir Putin, Russia's president, this was both an indignity and an encroachment. "What the US is doing in Ukraine is at our doorstep," he thundered at a meeting with military officers on December 21st. "They should understand that we have nowhere further to retreat. Do they think we'll just watch idly?"

The question was rhetorical. Mr Putin has spent much of the past year mobilising a vast army near the border with Ukraine. The force of perhaps 100,000 troops may be the largest military build-up in Europe since the cold war (see Europe section). With that stick in hand, he issued demands on December 17th for "legal guarantees" of Russia's security, in the form of draft treaties with America and NATO. In practice, Mr Putin was calling both for a massive retreat on NATO's part and the creation of a semi-formal Russian sphere of influence in eastern Europe, the Caucasus and Central Asia.

Consider a few of the treaties' provisions. The pact with NATO would require the alliance not only to rule out further expansion, but also to forgo military co-operation of any kind with Ukraine and other non-members in the former Soviet realm. Russia would not be bound by any reciprocal measures. Nor would NATO be allowed to place troops or weapons on the soil of its own members in eastern Europe, a condition that would involve dismantling the small NATO forces deployed in Poland and the Baltic states after Russia's invasion of Ukraine and annexation of Crimea in 2014. The agreement with America would entail the withdrawal of American nuclear weapons from Europe, without any constraint on Russia's considerable arsenal of comparable tactical nuclear weapons.

Even many Russian observers were stunned by the audacity of these demands. "Dear Father Christmas," quipped Elena Chernenko, a journalist at *Kommersant*, a leading Russian newspaper, "Please give me a live unicorn for the new year." That the proposals were published openly, rather than presented with the discretion typical of sensitive negotiations, suggested that Russia knew they were unlikely to fly, notes Dmitri Trenin, a former army officer who is director of the Carnegie Moscow Centre, a think-tank. Veteran Russia-watchers are struck by the unexplained

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sense of urgency, but it hardly suggests an appetite for patient diplomacy. "If there is no constructive response within a reasonable time," warned Sergei Lavrov, Russia's foreign minister, on December 31st, "then Russia will be forced to take all necessary measures to...eliminate unacceptable threats to our security."

One interpretation is that Mr Putin is counting on the West to dismiss his maximalist demands, furnishing him with a pretext to invade Ukraine. In recent weeks Mr Putin and his ministers have made lurid and ridiculous allegations, ranging from the suggestion that Ukraine is perpetrating genocide on ethnic Russians to the idea that American mercenaries are preparing a chemical-weapons attack in the Donbas region of eastern Ukraine, which is controlled by Russian proxies.

Use before thaw

Though European and American officials say Russia has not yet made a final decision to invade Ukraine, it will probably have to decide whether to launch an operation by the end of winter, says Michael Kofman of CNA, a think-tank. Troops cannot be kept on an invasion footing indefinitely, some of them thousands of kilometres from their normal bases, without their morale plummeting and their vehicles requiring maintenance. Ukraine's frozen ground will begin to thaw in March, making it harder for tanks to advance. In April Russia's conscripts will also be replaced with a new, inexperienced cohort.

Nonetheless, perhaps to avoid giving Mr Putin the opportunity to claim that he has run out of diplomatic road, America has agreed to talk. A phone call between Joe Biden, America's president, and Mr Putin on December 30th was "frank, meaningful and...quite constructive", noted Yury Ushakov, an aide to Mr Putin. "It is important that the American side has demonstrated its willingness to understand the logic and essence of Russian concerns," he added. Diplomats from both countries are due to meet in Geneva on January 10th. Two days later the NATO-Russia Council will meet in Brussels for the first time in years, and on January 13th the Organisation for Security and Co-operation in Europe (OSCE), a group that includes Russia and all NATO countries, is to gather in Vienna.

The flurry of diplomacy satisfies Mr Putin's desire for a seat at the top table and for a chance to air his grievances. Yet talking alone may not quench Mr Putin's thirst for vindication. On December 27th Mr Lavrov warned against "endless discussions, which is something the West knows how to do and is notorious for". Mr Putin will want something he can present as a diplomatic victory. What that might be is less clear, but Mr Putin and Mr Biden "are signalling a readiness to go around the conventional roadblocks to diplomacy on European security", suggests Matthew Rojansky of the Kennan Institute in Washington. He sees two areas of potential co-operation: missiles and conventional arms control.

Missiles may not seem a propitious place to start. In 2019 America abandoned the Intermediate-range Nuclear Forces (INF) treaty, which barred land-based missiles with ranges between 500km and 5,500km, arguing that a new Russian missile violated it. America and NATO have repeatedly dismissed Russia's offer of a moratorium on such weapons, arguing that Russia has already deployed them. For its part, Russia claims that American anti-missile interceptors under construction in Romania and Poland can be repurposed as offensive missile launchers.

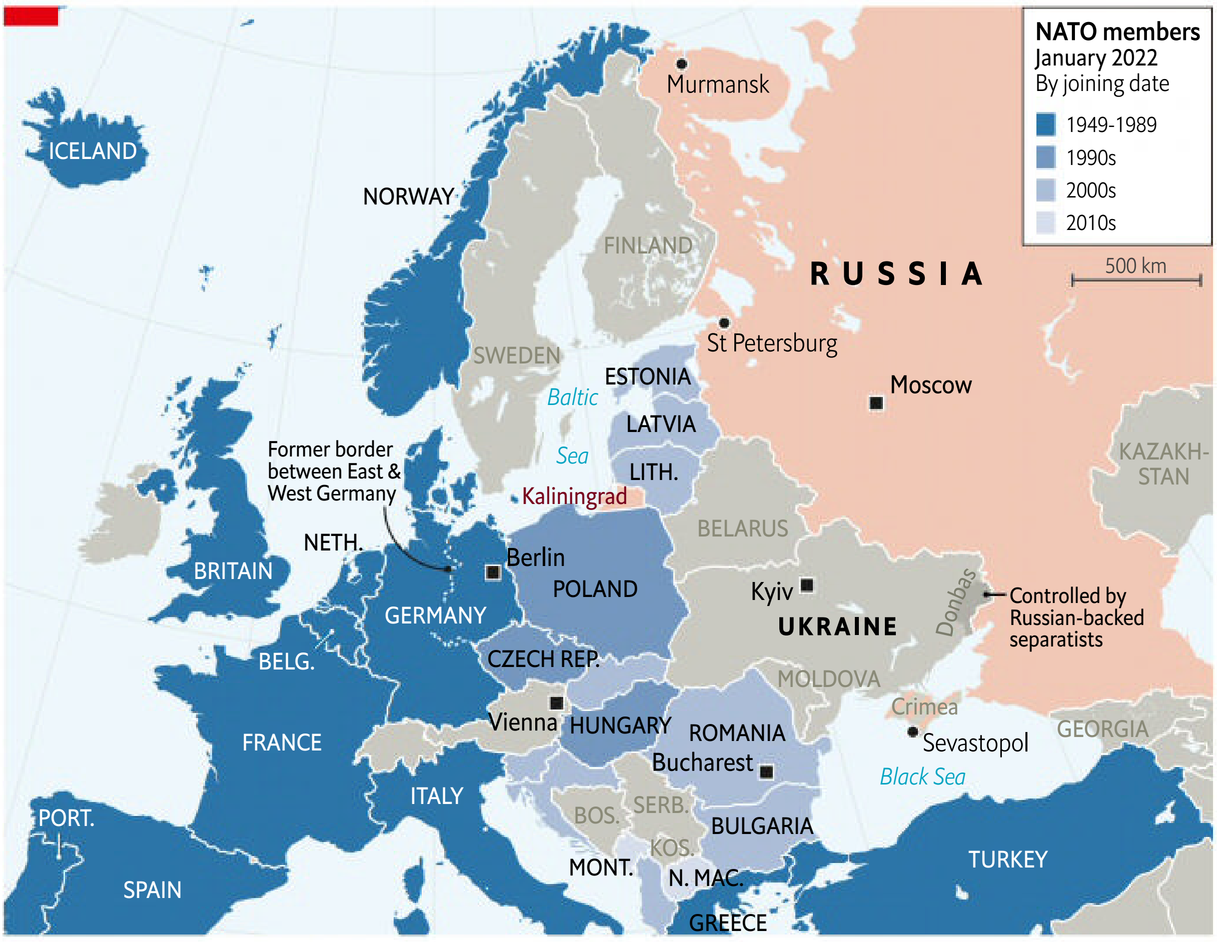
Even so, both America and Russia might find grounds for compromise. Mr Putin routinely frets that if America were to place hypothetical medium-range missiles in eastern Europe, including in Ukraine, they could reach Moscow in minutes. Meanwhile, Mr Putin's own cruise missiles in Kaliningrad could reach Berlin just as quickly. A deal which barred those missiles from Europe but left America free to deploy them against China in Asia—essentially a resurrected and regionalised INF treaty—might appeal to both sides.

If missiles prove intractable, another subject of discussion could be conventional arms control. Here, too, both sides have a long, and long-standing, list of gripes. A pact signed in 1999, the Adapted Conventional Forces in Europe (ACFE) treaty, withered away after Western countries accused Russia of failing to withdraw in a timely fashion from Moldova and Georgia, both former Soviet republics. Russia suspended its participation in 2007 and withdrew from the treaty altogether in 2015, angry that others had not ratified it.

Western allies complain that Russia has bent other rules requiring countries to give advance notice of large exercises—like last year's Zapad exercise—by pretending that big drills are in fact a series of separate smaller ones. Russia, in turn, says that the West has failed to consider its suggestions, made over recent years, for confidence-building measures, such as proposals for warplanes to use transponders, greater notice of long-range bomber flights and the movement of exercises away from borders.

A new, full-blown treaty governing such things is unlikely. For NATO to forgo drills near Russia would be tantamount to cutting off the Baltic states, no part of which is far from Russia. Nor would Russia consider a reciprocal ban on exercises in Kaliningrad, an exclave between Poland and Lithuania, or Murmansk, near Norway, or Belarus, which abuts Poland, says Dmitry Stefanovich of IMEMO, an institute linked to the Russian Academy of Sciences. But greater transparency and limits on the size of exercises are possible, he says, and would build trust. Olga Oliker of the International Crisis Group, yet another think-tank, suggests that the Black Sea would be a promising candidate for mutual restraint with, for instance, NATO countries conducting fewer patrols near Crimea in exchange for Russia accepting constraints on its Black Sea Fleet. "All of this could be sorted out," she says. "But everybody has to be willing to sit down and compromise."

Measures like these would be welcome, whatever happens in Ukraine. It is unlike-



ly, though, that Mr Putin has threatened war simply to obtain more detailed spreadsheets about forthcoming NATO exercises. His animus is against the post-cold-war order as a whole, and Russia's exclusion from it. In his narrative America and its European allies took advantage of Russia's weakness in the 1990s and early 2000s by discarding their promises not to expand NATO; by waging war on Serbia, a Russian ally, in 1999; and by supporting so-called "colour revolutions" against authoritarian, pro-Russian regimes in former Soviet states. Indeed, this week pro-Kremlin news outlets claimed, fancifully, that anti-government protests in Kazakhstan (see Asia section) reflected a Western effort to eject friends of Russia from power.

It is true that Russia received various assurances that NATO would not expand—but it also willingly acquiesced when NATO changed its stance. In 1997—even as the Czech Republic, Hungary and Poland were being invited to join the alliance—Russia and NATO signed a "founding act" in which Russia accepted NATO enlargement. In exchange, NATO ruled out the "permanent" deployment of "substantial combat forces" in eastern Europe or the placement of nuclear weapons there, a constraint it observes to this day. What is more, America withdrew huge numbers of troops from Europe after the cold war and European countries shrank their armed forces dramatically.

These steps had a salutary effect on Russia's perception of the alliance. In 2001, shortly after the 9/11 attacks, Mr Putin met NATO's secretary-general and hailed "the change in the attitude and...outlook of all the Western partners". As late as 2010, by which time a dozen new countries had joined NATO, Dmitry Medvedev, then Russia's president, agreed, "We have succeeded in putting the difficult period in our relations behind us now."

It's not me, it's you

Relations have deteriorated more recently not owing to aggression from NATO, but because Russia, unwilling to countenance more former Soviet territories going their own way, invaded Georgia in 2008 and Ukraine in 2014. It has also waged political warfare across America and Europe over the past decade, in the form of election-meddling, sabotage and assassination. At home, Mr Putin has suffocated democracy by rigging elections, poisoning opponents and crushing civil society. "Putin does not fear NATO expansion today," argues Michael McFaul, a former American ambassador to Russia. "He fears Ukrainian democracy."

NATO has no stomach to admit Ukraine at the moment, with all the risks of war with Russia that would bring. But ruling out Ukrainian membership would not necessarily placate Mr Putin. "The Kremlin knows that there's no intention by NATO to include Ukraine and Georgia any time in the near future," says Wolfgang Ischinger, a former German diplomat and chairman of the Munich Security Conference, an annual powwow. "The underlying problem is the fear of Ukraine modernising and becoming an attractive model for Russians who live on the other side of the border."

Stuck in a rut

Meanwhile, for NATO to formalise the obvious—that Ukraine will not join any time soon—would be a hammer blow to the country's reformers, who have even written their aspiration to enter the club into the constitution. To make such a declaration in response to Russian sabre-rattling would be doubly unpalatable. One way to square the circle, suggests Mr Ischinger, would be to adopt the position taken by the European Union in recent years: that, while enlargement is the goal in principle, the union must first reform itself. That might let down Ukraine gently, without giving the impression that Russia has a veto over the alliance's expansion.

Ukraine is not the only place where this dilemma arises. Georgia was also invited to join in 2008 but its accession would also entail NATO inheriting another open conflict; Russia occupies a fifth of the country, in the breakaway territories of Abkhazia and South Ossetia. Meanwhile in the Balkans, Bosnia-Herzegovina, another candidate, is also some way off, with the country's Bosnian Serb leadership increasingly opposed to membership.

Russia also objects to the expansion of NATO to include Sweden and Finland, which were both neutral during the cold war, but have moved closer to NATO in recent years. In Sweden a parliamentary majority in favour of NATO membership emerged in December 2020, though the ruling Social Democrats are opposed. Finland, meanwhile, is keen to keep its options open. On January 1st, days after Russia's foreign ministry threatened "serious military and political consequences" if Sweden or Finland were to join the alliance, Sauli Niinisto, Finland's president, rejected Russia's attempts at intimidation. "Finland's room to manoeuvre and freedom of choice," warned Mr Niinisto, "include the possibility of military alignment and of applying for NATO membership, should we ourselves so decide."

The irony is that Russia's efforts to halt NATO's eastward expansion may end up achieving precisely the opposite. Russia's invasion of Ukraine in 2014 rejuvenated the alliance, catalysed a sharp rise in European defence spending and led to the creation of the very NATO deployments in eastern Europe that Mr Putin now wants withdrawn. Another, larger Russian attack would probably lead to even larger deployments; Mr Biden has already said that he would move troops east.

By the same token, although a second Russian invasion of Ukraine might put an end to any prospect of Ukraine joining NATO, it could well push other countries into the alliance. "It's hard to say whether a Russian invasion of the entirety of Ukraine would be enough to tip the scales," muses one senior Finnish official, "but that would be possible. There's an increasing understanding that even though Ukraine may be geographically hundreds of miles away from Finland, Europe is one theatre."

For Mr Putin, the gamble may be worth it. Better to start a war now, despite the attendant costs, than risk a Ukraine bristling with foreign troops in a decade. Thirty years ago Robert Jervis, a political scientist, applied prospect theory, a branch of behavioural economics, to war and peace. The theory notes that people tend to run greater risks when they feel they are losing. "Wars will then frequently be triggered by the fear of loss," he wrote. "When states take very high risks it is usually the case that they believe they will have to accept certain losses if they do not."

What Mr Putin claims is a quest for security—"we have nowhere further to retreat"—looks to the rest of Europe like a brazen effort to recapture formerly captive states, and to keep them under some form of Russian sway. An insecure Kremlin that lashes out to make itself more secure thereby compounds a spiral of insecurity. Mr Ischinger, the former German diplomat, recalls asking a very senior Russian official in Moscow in 1993 about how the country intended to assuage the fears of newly liberated countries like Poland and Ukraine. "What's wrong with our neighbours living in fear of us?" replied the official. "Unfortunately," says Mr Ischinger, "very little, if anything, has changed." ■

Listen to our interview with author Robert Kaplan about Russia and Ukraine at www.economist.com/Kaplan

GLOBAL COMICS INDUSTRY IN THE AGE OF INTERNET

As Netflix's drama Squid Game sweeps the entire world with 3.26 billion minutes views by the end of 2021, investors in the global market now realize that "new stories with non-North American narratives" are gaining a strong foothold in the post-Avengers era. Behind this unprecedented success is the ever-expanding foundation of Japanese comics, the strong globalization of South Korean comics, and the newly emerging comic forces in other parts of Asia.

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COMICS

Naver and Kakao, two comic giants with different approaches

South Korean comic giants Naver (Naver Webtoon + Line Webtoon) and Kakao (Daum Webtoon + Kakao Page + Piccoma) as top content industrialization players, represent two differentiating approaches in the digital comics platform.

In 2014, Naver's Line Webtoon was officially launched in the North American market and has since became the world's most active digital comics platform. As for Kakao's Piccoma which launched in 2016, surpassed Japan's Line Manga and became the most profitable digital comics platform in the world in August 2020.

New players continue to emerge: Bilibili Comics

As the global market expands, more and more new players decide to join the competition. According to App Annie's data, Bilibili Comics has gained 3 million monthly active users (MAU) and a daily active peak of 824,000 in just six months after its launch in April 2021. The platform's MAU now ranks 3rd in the highly competitive English-speaking market.

One of the platform's most popular comics is a trending IP with great potential,' Heaven Official's Blessing. With its massive worldview integrating with a plot filled with mystical Chinese history, it created 19 global trend hashtags on Twitter when its animated version was launched.

From recent trends and comparisons among Bilibili Comics and its counterparts, we can see that digital comics platform have great potentials in the global entertainment market. Based on the Korean comic giants' successes in globalization, it is undeniable that Bilibili Comics has great prospects in expanding to North America, South America, Europe and Asia markets. In the foreseeable future, digital comics will surely develop its force against major entertainment companies.

The politics of 2022

A daunting year for Democrats

WASHINGTON, DC

The momentum is shifting to Donald Trump’s Republicans

IN 2021 JOE BIDEN’S presidency began with early success, not long after a violent insurrection at the Capitol by diehard supporters of Donald Trump. In 2022, a reversal of fortunes is likely. Whatever verve the Biden administration still has may be killed off after the mid-term elections in November—a date that will also mark the unofficial start of the next presidential contest, which at this point seems a prelude to Mr Trump’s recoronation.

Consider first the flagging fortunes of the son of Scranton. After success at passing a gargantuan stimulus package (in hindsight it was too big), Mr Biden’s presidency became stuck. The blows came one after the other: high inflation, fuelled partly by fiscal stimulus; an unrelenting pandemic; the chaotic withdrawal from Afghanistan; and the White House’s inability to whip Democratic majorities into voting for legislation. His approval rating has declined by 25 percentage points since the start of his term—leaving him nearly as unpopular as Mr Trump at this point of his presidency (see chart on next page). Before Christmas, a pivotal senator dealt a deathblow to the Build Back Better (BBB) act, a package of climate-change mitigation and social benefits which was meant to be the signature legislation of his presidency.

Heightening the malaise are the elections looming in November, in which Mr Biden will probably lose what ability he still has to legislate. Presidents almost always suffer losses in their first mid-term elections, and the razor-thin majorities Democrats retain in both chambers of Congress are unlikely to hold. Republicans need to take just five seats in the House of Representatives to win a majority and an explicit veto over all Mr Biden’s desired legislation. In 2010 Barack Obama lost 63 seats in his self-described “shellacking”. In 2018 Mr Trump lost 35.

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Were Mr Biden’s approval rating higher, he might have reason to hope to escape this eventuality. Unfortunately for him, it is not. Betting markets give Republicans an 82% chance of winning the House, and a 70% chance of retaking the Senate to boot.

The retirement announcements of longtime members of Congress, who prefer not to leave office by electoral rejection, are an omen of what probably lies ahead. So far 25 House Democrats have said they will not seek re-election, including some powerful committee chairmen, compared with 12 Republicans. Importantly, 17 of those Democrats are not leaving to seek another office or prominent position (“pure retirements”), as against four of the Republicans. In previous election years retirements have been leading indicators of losses for the party in power. Exogenous events, such as the Supreme Court’s curtailing of constitutional rights to abortion provoking a backlash in the suburbs, may help Democrats at the margin. But the end result is unlikely to remain full Democratic control of Washington.

That leaves just a few months for Democrats to make use of their unified control of

▸▸

Congress and the White House. Much of the ostensibly highest-priority legislation pledged to its partisans—to bolster voting rights, boost unions, reduce police brutality and reform the immigration system—is dead on arrival, because the filibuster in the Senate allows the Republican minority to deny it passage. The filibuster itself, which progressives had once hoped would be dispensed with, is set to stay.

Rather than waste too much time on signalling bills without much chance of passage, Democrats are instead likely to devote months to resuscitating a pale version of BBB (which itself is theoretically passable only because a special budgetary procedure can circumvent the filibuster). Strenuous negotiations with Joe Manchin, the main Democratic holdout, are the only way forward for the president if he wishes to have something substantive to present to voters in November. They are likely to drag for months. The demands of the campaign season and the difficulty of actual passage may leave little time or inclination for anything else.

By year's end, then, momentum will probably have shifted from Democrats to Republicans. Electoral victory will seem to validate the party's failure to reckon with its leader's serious attempts to subvert elections. In fact, it may be even more beholden to him.

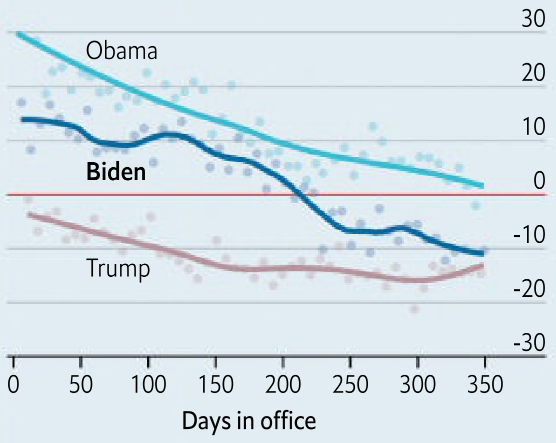
Few of the Republicans who voted to impeach Mr Trump for his actions after his electoral loss will remain in office. After purges in the party primaries, internal resistance to Mr Trump's whims will be weaker. The former establishmentarians who made their peace with Trumpism will see rewards. Kevin McCarthy will probably ascend to the speakership of the House that he covets. All this will be achieved with no need for the Republican Party to come up with a policy agenda in response to the defeats in 2020.

The ambitious policy agenda of the Democrats, meanwhile, will probably languish as the usual forces of gridlock and partisanship come to dominate a divided Congress. Like Mr Obama before him, Mr Biden will then have to rely on transient executive actions and orders to get just about anything done.

In both parties, jockeying for the next presidential election is already well under way, though the contest may be a repeat of 2020. Both Mr Biden and Mr Trump are hubristic enough to refuse to relinquish power to younger politicians. Yet both are also old enough for their health to preclude them from running. Kamala Harris, the vice-president, will still be the Democrats' heir apparent, despite her dismal campaign in 2020 and rocky first year as the second-in-command. If Mr Trump were not to run, a populist crafted in his image, such as Florida's governor, Ron DeSantis, is his likely successor. Even if the elderly men were to stand aside, America is likely to be treated to a duel of seconds. ■

Presidential plummet

US presidential net approval, percentage points



Source: YouGov/*The Economist*

Adjusting to Omicron

Covid reconsidered

WASHINGTON, DC

America starts to favour social well-being over individual illness

OMICRON, A major variant of the SARS-COV-2 virus, prompted governments around the world to scramble to slow it down as it surged from late November. The Biden administration announced a travel ban (since revoked) against eight African countries and a shortened window for testing (from 72 hours to 24) for inbound travellers. Hospitals began filling with patients. By late December daily cases were higher than ever. More than 3,700 schools began in January with remote learning.

Yet some measures are being relaxed. The Centres for Disease Control and Prevention (CDC) shortened the recommended isolation period from ten days to five, plus five of mask-wearing. On January 4th it updated the guidance to encourage testing. Anthony Fauci, the leading adviser to the White House on infectious diseases, is calling for less emphasis on case rates and a focus on hospitalisations and deaths. Why this mixed response?

Though more contagious than Delta, the previous dominant strain, Omicron is less severe. It is spreading at a time when more people have immunity from vaccines or have had covid in the past; both offer high protection against severe covid. In Britain people with Omicron are 55-69% less likely than those with Delta to need hospital care, largely because more Omicron cases are reinfections. Vaccines also help. One study found that two doses of the Pfizer-BioNTech vaccine were 70% effective against hospitalisation for Omicron.

Hospitals are filling mostly with unvaccinated patients, and the least-vaccinated areas are being hit the hardest with severe illness. Some states, like Kentucky and Michigan, have experienced more covid-19 deaths than before vaccines were available. Their vaccination rates also lag behind: 54% and 57% of their populations are fully vaccinated, respectively, compared with over 70% in most north-eastern states.

America's overall vaccination rate remains stubbornly low. On January 7th the Supreme Court will hear arguments in two cases challenging Joe Biden's efforts to get more Americans jabbed. In *National Federation of Independent Business v Department of Labour, Occupational Safety and Health Administration,* the justices will weigh an emergency rule that all businesses with 100 or more workers need to be fully vaccinated or masked and tested weekly. After the Fifth Circuit Court of Appeals blocked the mandate in November, a three-judge panel of the Sixth Circuit Court of Appeals reinstated it. Now the Supreme Court will decide whether the vaccine-or-test rule can be imposed while litigation drags on.

The justices will also take up a rule by the Department of Health and Human Services requiring jabs for health-care workers at nursing homes and other facilities covered by Medicare or Medicaid. In November two district-court judges blocked this mandate as an unconstitutional usurpation of congressional power. The government argues that the mandates are justified to cope with a public-health emergency. Opponents say the purported emergency is overblown. They contend that the agencies lack authorisation to issue mandates that will disrupt health care.

The health-care industry can hardly afford further disruption. The CDC has reduced the isolation period in response to a need for workers. Many hospitals in New York could no longer accept patients in ▸▸

Testing times

their emergency rooms because of staffing and bed shortages, says Martin Stallone, CEO of Cayuga Medical Centre in Ithaca, New York. The new CDC guidance allows critical health-care workers to return sooner (though Cayuga Medical is still recommending a 10-to-14-day isolation).

Shortages are affecting other industries, too. Airlines had to cancel thousands of flights, often because of lack of staff. According to the CDC, infected people are most contagious one-to-two days before the onset of symptoms and two-to-three days after. A five-day isolation, plus five days of masking, lets workers return more quickly, minimising disruption.

After nearly two years of prioritising individual risk-mitigation over social disruption, American health experts are beginning to lighten up. "This is a very different virus than the one that we saw earlier on in the pandemic," explains Leana Wen, a former health commissioner of Baltimore. "The risk to most [vaccinated] individuals right now of Omicron is very low. The risk that Omicron is causing society in terms of widespread dysfunction is very high." The pandemic seems to have hit a turning-point. ■

Electoral administration

Who counts wins

NEW YORK

Reforming the Electoral Count Act would help prevent another revolt

FOR MUCH of the past year, Democrats in Congress have fitfully and unsuccessfully pushed various bits of voting-rights legislation. Whatever the merits of these bills, they are an odd first response to the insurrection of January 6th 2021. Record numbers of Americans voted in 2020. Long queues and pandemic-driven confusion notwithstanding, the problem was not access to the ballot, it was the attempted chicanery with the counting. The Electoral Count Act of 1887 (ECA), which tries to set guidelines for how Congress settles disputed results in presidential elections, is vague, confusing, possibly unconstitutional—and ripe for reform.

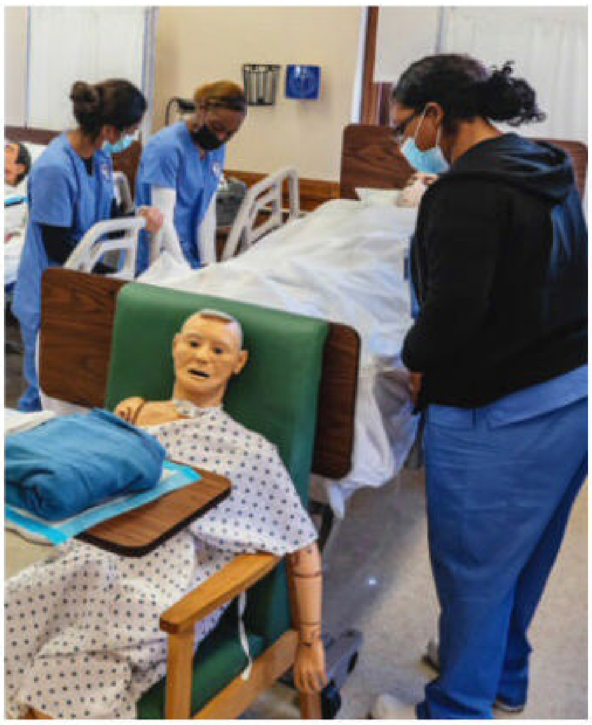
To understand what the ECA does, it helps to understand America's byzantine method of electing a chief executive. When Americans cast a vote for president, they are actually voting for a slate of electors who will themselves vote for that candidate at the electoral-college meeting. Article II of the constitution explains that each state gets the same number of electors as it has members of the House and Senate, that states send certified election results to Congress, and that in a full joint session of Congress the president of the Senate (who is also the vice-president) will "open all the Certificates, and the Votes shall then be counted". If no candidate reaches a majority of electoral-college votes, then the House chooses the president, with each state's delegation getting a single vote.

The ECA was intended to be a guide for resolving disputes. It permits legislators to formally object to individual results or entire states' slates, provided each objection is signed by at least one senator and representative. If majorities in both chambers uphold the objection, the votes in question are not counted. It also establishes a "safe harbour" deadline, establishing that as long as states resolve any disputed results at least six days before the electoral college votes, then those results are "conclusive" and Congress must count them.

But the ECA leaves much uncertain, including the grounds on which members of Congress can object, the role of courts in settling disputes and whether the vice-president has any discretion in the vote-counting process. Worse, it lets Congress reject valid votes. All that has to happen is for states to provide competing slates of electors (as urged by John Eastman, a lawyer advising Donald Trump in the denouement of the 2020 election) and for a majority of both chambers of Congress to back the alternative slates. Congress, rather than the American people, could thus select the president. The constitution's creators rejected letting the legislature select the executive—but if Republicans control both chambers of Congress in 2024, as well as the governorships of enough crucial swing states, and a scenario similar to 2020 emerges again, it would be unwise to rely on principle and fealty to the founders prevailing over bare-knuckled realpolitik.

Many on the right are also concerned about ECA abuse. If Republicans can vote to reject results they dislike over unfounded allegations of fraud, Democrats could in theory do the same over concerns about racially biased election practices. Some libertarian-minded legal scholars argue that the ECA itself—specifically, the provisions that allow Congress to reject slates of voters—is unconstitutional, because Article II provides no mechanism for rejection.

By allowing federal legislators to impose their preferences, the ECA weakens state control over elections, which Republicans have traditionally defended. In 2020 Marco Rubio, a Republican senator from Florida, proposed extending the ECA's safe-harbour deadline. John Thune and Mitch McConnell, the top two Republican senators, have expressed openness to reforming the ECA. Some Democrats see this offer as a ruse to weaken support for voting rights, which it may be—but one with a worthwhile result. ■



Medical education and gender

Identity problems

WASHINGTON, DC

Trans ideology is distorting the training of doctors

GENDER DYSPHORIA, the often agonising feeling that one has been born in the wrong body, is listed in the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders". So Katherine (not her real name) was surprised, in her first week at Louisiana State University School of Medicine, when a lecturer told a class that gender dysphoria was not a mental illness. It suggested that gender-identity ideology, which holds that transgender women are women and trans men are men, had influenced some of those who were training her to be a doctor.

More evidence followed. An endocrinologist told a class that females on testosterone had a similar risk of heart attack to males (they have a much higher risk). Debate about all this was apparently off-limits. How has trans ideology made its way into medical schools?

Professional bodies, including the American Academy of Paediatrics, have endorsed "gender-affirmative" care, which accepts patients' self-diagnosis that they are trans. This can mean the prescription of puberty blockers for children as young as nine. Trans medicine is not a core part of medical schools' curriculums. But an academic paediatrician (who did not want her name, institution or state to appear in this story) says that all medical students understand that they are expected to follow the affirmation model "uncritically and unquestioningly". For most doctors that will mean referring a patient to a gender clinic, some of which prescribe blockers or cross-sex hormones on a first visit. “We treat infections with antibiotics, no questions asked—it is just exactly like that,” she says.

Affirmative care has done irreversible harm to some young people’s bodies. This has become especially clear from the experience of “detransitioners” who regret taking hormones or having their breasts or genitals removed. Puberty blockers also prevent bones from developing properly; when combined with cross-sex hormones they can lead to infertility and inability to have an orgasm. A 26-year-old student at a medical school in Florida who plans to become a paediatrician is shocked by what she has not been taught about these treatments. “With other diseases and treatments we are taught in such depth about every possible side-effect,” she says.

Medical-school academics suggest two reasons for all this. One (reflected in the fact that none wanted their names published) is fear. Some trans-rights activists bully anyone who expresses concerns publicly. The other is ignorance. A paediatrician who teaches at a medical school in Florida says once doctors have finished their training, many pay scant attention to new medical research but rely on the media for information. In America there has been little coverage of the dangers of blockers or the woes of detransitioners.

Last year Marci Bowers, a surgeon (and trans woman) who performs vaginoplasties and phalloplasties, said she no longer approved of the use of puberty blockers because they left surgeons with too little genital material to work with and led to a loss of sexual function. This, extraordinarily, appeared to surprise some gender-clinic medics. Ignoring the difference between biological sex and gender at medical school has other risks. Several diseases present differently in men and women or are more common in one sex than the other. A doctor who treats a trans man, say, as a man might miss something important.

Katherine, the student in Louisiana, worries about the effects on female patients. As a black woman, she is acutely aware that “when physicians have an implicit bias against black people, it leads to poorer delivery of care”. Gender-identity ideology, with the use of such terms as “bodies with vaginas” in medical journals, has “increased bias against women by normalising dehumanising language and by ginning up hatred of women who assert their boundaries”. She is concerned that doctors who have absorbed these views during training may be less likely to deliver high-quality care to female patients.

She also worries that gender ideology is impeding the development of medical students’ critical judgment. “It’s a problem”, she says, “when doctors start believing that they can simply ignore medical evidence and scientific facts that they don’t like.” ■

Indigenous cuisine

Crickets, blue corn and bison tartare

Native American chefs are cooking up a culinary renaissance

SEAN SHERMAN reckons he uses 25 pounds (11 kilos) of crickets a week: “Pretty much every table buys some.” His restaurant, Owamni by the Sioux Chef, opened in Minneapolis in July and serves Native American fare. Customers can feast on blue-corn mush and bison tartare. Though indigenous restaurants remain scarce, they are spreading. Recent openings include Wapehpah’s Kitchen in Oakland, California, and Watecha Bowl in Sioux Falls, South Dakota.

What counts as Native American food remains up for debate. Mr Sherman uses only ingredients found in North America before Columbus arrived. Diners will find no wheat, beef, pork or chicken at Owamni. If rules change, they may be able to order something furrier. Mr Sherman has “a couple beavers" in his freezer but “can’t sell them to the public because that kind of licensing doesn’t even exist”.

Lois Ellen Frank, a food historian and caterer, takes a different tack. She says if every society were constrained by the ingredients available to their distant ancestors, Italians would have no pasta al pomodoro and Britons no chips. (Both tomatoes and potatoes came to Europe from the New World.) Ms Frank includes foods introduced to the south-west by the Spanish, such as watermelon and wheat. On her menu are cactus-leaf salad and blue-corn gnocchi.

A fault line has emerged around fry bread, a pillowy, deep-fried flatbread that can be served sweet or as a taco. Legend has it that Navajo women invented it using the rations provided when the government forcibly moved their tribe from Arizona to New Mexico in the 1860s. Some chefs refuse to serve it, saying it represents colonialism and modern-day health struggles. In 2017 the Miss Navajo pageant ditched the portion of the contest where contestants make fry bread. Miss Navajo hopefuls now cook up other dishes including chiilchin, a red sumac-berry pudding. Others think fry bread is a symbol of survival and ingenuity.

Ms Frank has a middle way. She sometimes offers a healthier version: “no-fry fry bread”. She uses blue-corn flour and grills the stuff instead of frying it.

The scarcity of Native American restaurants has much to do with history. In the mid-1800s, as the government pushed indigenous people westward to take their land, many of their recipes no longer made sense in a new climate. Until the 1970s most Native Americans lived in rural places. By the time they moved to cities in numbers, they were “too late and too few” to have a booming restaurant scene, says Krishnendu Ray of New York University.

Indigenous eateries have opened from time to time since the 1980s, but have failed to catch on. This time may be different. President Joe Biden’s stimulus bill included a big increase in funding for tribal governments and programmes aimed at helping Native Americans. America is in a racial reckoning. That applies to food, too. Owamni has been fully booked every night since it opened.

A bowl full of heritage

Latter-day Saints

Going forth and striving to multiply

PROVO AND SÃO PAULO

Can Mormonism thrive as a global religion while retaining its distinctive culture?

One is a small city of fewer than 120,000 people. The other is home to more residents than New York City and Chicago combined. Yet one thing binds Provo, Utah, and São Paulo, Brazil: both boast white temples with a single spire that reaches towards the heavens. One is surrounded by mountains and the other by palm trees, but the simple architecture of Mormon churches mean they resemble each other. This sameness is a hallmark of the Church of Jesus Christ of Latter-day Saints, as Mormonism is formally known. Cristiane Fernandes, who worships at the temple in São Paulo, says the church is "like McDonald's", in that "the whole world is having the same lesson today".

Mormonism is a distinctly American religion. Its early leaders travelled—and were chased—from upstate New York to the church's current spiritual and cultural capital in Salt Lake City, Utah. Yet in recent decades the Christian sect has also spread beyond America's borders. The church estimates that there are 16.6m Mormons around the world, a 50% increase since 2000. Matt Martinich, an independent demographer who runs a blog devoted to the church's growth, estimates that baptisms of American converts may now account for only 20% of worldwide baptisms.

That looks like muscular, global growth for a religion that claims less than 2% of Americans as believers. But accounting quirks embellish the true picture. "The dirty little secret that everybody who has gone on a mission knows is that a lot of this growth is on paper only," says Rick Phillips, a sociologist at the University of North Florida. Anyone ever baptised or born into the faith is counted as a member, even if they are no longer active in the church. Mr Martinich reckons that only about 40% of American Mormons are active.

Brazil has the third-largest Mormon population in the world, after the United States and Mexico. Church rolls suggest there were 1.1m Mormons in Brazil in 2010, but only about 227,000 Brazilians identified as Mormon in the census the same year. "Latin America has always been the problematic case," says Patrick Mason of Utah State University. "On the one hand, it's the poster-child for Mormon growth outside the United States. But it's also the poster-child for low retention rates."

The McDonald's model

Scholars who study Latter-day Saints point to three main reasons why Mormonism may struggle to retain converts abroad. The first is the centralised nature of the church. The church's wealth, leadership and theological teachings still emanate from Salt Lake City. Ms Fernandes's quip that, like McDonald's, Mormon churches around the world are similar has long been a point of pride. "The corporate mentality in post-war America was that you would have one corporate culture for your company—whether that was GE or IBM—and then wherever you went around the world, that would be the culture of your business," says Jana Riess, author of "The Next Mormons: How Millennials are Changing the LDS Church". "The church succeeded with that model for a long time."

But can a one-size-fits-all religion thrive on a global scale? The sameness that makes a Mormon church in São Paulo feel like a church in Provo may be comforting to some, but it prevents the religion from adapting to different cultures. More decentralised Christian sects, such as Pentecostals, Seventh Day Adventists and Jehovah's Witnesses, have grown more quickly in many countries.

Second, the congregation a Mormon joins is based on where they live. "If I'm a Pentecostal, and…I want a pastor who is a little more strict, or one who's a little more liberal, I can find my theological niche," says Mr Phillips. Not so for Mormons.

Third, some suggest that Mormons might reform their missionary practices in order to retain members better. About 55,000 missionaries are serving worldwide; 20,000 or so were prepped at a training centre that resembles a small college campus in Provo. When your correspondent visited just before Christmas, all the missionaries bound for Brazil had been recently dispatched. But Portuguese could still be heard in the halls. One group destined variously for Lisbon, Cape Verde and New York began their language class by singing "Noite Feliz" ("Silent Night").

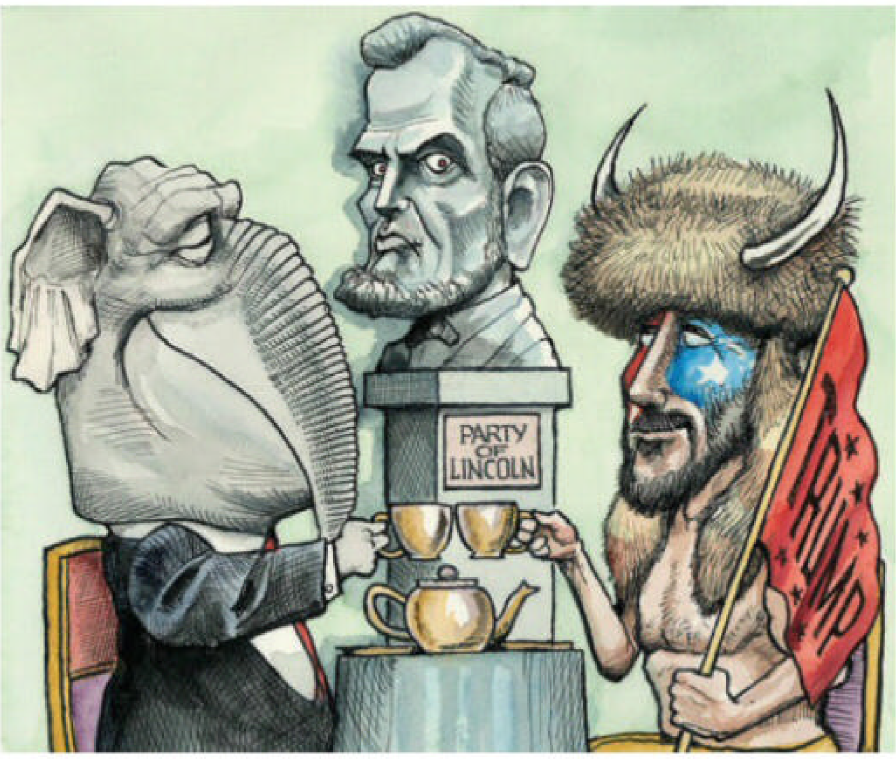
Much emphasis is placed on baptising new members; missionaries knock on doors and use social media to reach potential converts. But church leaders and academics agree that this alone is insufficient. Employing missionaries who grew up in places where the church is growing relatively quickly, such as the Philippines and west Africa, to proselytise to their own countrymen may also prove more effective than sending Americans.

Some things are starting to change. Ms Riess points out that the handbook of instructions that church leaders use was recently revised to allow for more musical styles and instruments in worship. The church's leaders and its missionaries are, slowly, becoming more geographically diverse. In recent decades, missionaries have also been allowed much more contact with their families. Part of that is the result of better technology. But it may also be a clever way to boost retention rates: the more Mormon parents hear about their missionary's experience, the more connected to the church they may feel.

At the training centre in Provo, existential questions about the future of the church feel very far away. Soon-to-be missionaries parade around with name tags announcing where they will serve. Tearful parents drop off their children for training much as others drop their teenagers off for college. Here, at least, fervour for the global church is alive and well. ■

Lexington | The insurrection, one year on

The Republican Party has rewritten the history of the violence its leader caused



Dawn Bancroft, a 59-year-old gym owner from Pennsylvania, travelled to the national capital a year ago this week to hear Donald Trump speak, not to commit terrorism. Yet as she marched up Constitution Avenue, with the former president's instruction to "fight like hell" ringing in her ears, Ms Bancroft apparently mislaid her moral compass.

Forcing a way through the mob outside the Capitol building, she and her friend Diana came to a shattered window and clambered through it. "We got inside, we did our part," Ms Bancroft later explained in a video message to her children. "We were looking for Nancy to shoot her in the friggin' brain. But we didn't find her."

After hearing the women plead guilty to a misdemeanour last September, Judge Emmet Sullivan wondered "how good people who never got into trouble with the law morphed into terrorists". Court documents suggest that describes most of the 700-odd people so far charged over the insurrection—including around 225 accused of assaulting or impeding the police. Few had previous convictions or links to far-right groups. Most were the same unremarkable white people, in high spirits and wearing Trump merchandise, who swell the former president's rallies. They are small-business owners, teachers, estate agents and retired folk.

Contrary to the implication of Judge Sullivan's question, this is not mystifying but self-explanatory. If you believed the election had been stolen, as tens of millions of Republican voters did even before the results were out, why wouldn't you take the desperate measures Mr Trump demanded? Ms Bancroft and the rest thought they were doing their patriotic duty.

Most made no effort to hide their identities. A Texan estate agent plugged her company while live-streaming the attack; an Ohioan kicked in a window of the Capitol wearing a jacket bearing the name and phone number of his decorating firm. The riot, as the biggest prosecutorial effort in American history has already made clear, was the logical expression of Mr Trump's big lie, proudly carried out by 2,000 of his devoted supporters. To repudiate the violence, Republicans had no alternative but to repudiate the lie. Having failed to do so, they are instead normalising it.

That process began hours after the riot, when most Republican congressmen and -women formally disputed the election result. This ended any serious prospect of them breaking with Mr Trump, who has duly rewritten the reality of the violence he caused. He has claimed the rioters were "innocent" people "persecuted" by the police; that the real "insurrection took place" on election day. And yet if some of his supporters overstepped the mark, what of that? Mr Trump has also suggested it was "common sense" for them to chant "Hang Mike Pence" during the riot, given his deputy's reluctance to steal the election. This is classic Trumpian disinformation: a smorgasbord of inconsistent cognitive dissonances for his supporters to select from. He celebrates their violence even as he denies it took place and blames it on the other side.

Having reaffirmed their fealty to Mr Trump, most Republican lawmakers felt compelled to prevent investigation of the insurrection. They blocked a high-level bipartisan inquiry into the violence and, when the Democrats proposed a weaker House select-committee investigation instead, lambasted it as a partisan stunt. With the participation of two principled Republicans, Liz Cheney and Adam Kinzinger, that committee has since interviewed hundreds of witnesses. But its main targets, Mr Trump and his senior lieutenants, are obstructing it, apparently in the hope that the Republicans will retake the House in November and scrap it.

Both scenarios appear likely, in part because most Republican voters aren't interested in litigating the violence either. A year after the rampage, which claimed five lives and injured more than 100 police officers, most Republicans say it was either peaceful or "somewhat" violent; and that Mr Trump bears little or no responsibility for it. Democrats say the opposite. They also doubt their opponents' motives. To downplay the violence is to rationalise it, which in the current fraught environment, many Democrats believe, is tantamount to a promise of a repeat performance.

There is no prospect of this week's commemoration of the insurrection bringing a modicum of national unity. Americans disagree wildly on what is even being commemorated. And this latest severe disagreement, unsurprisingly, has made them more divided generally. Partisan relations on the Hill, which were hardly rosy before the riot, are abysmal. "The insurrection was a moment that changed Congress," says Representative Cheri Bustos, a moderate Democrat from Illinois. "There's a lack of trust, a lack of respect."

Some Democrats still refuse to co-operate with any Republican who voted to decertify the election. Many Democrats and the handful of Republican holdouts against Mr Trump have received death threats from his supporters. The animated video that Paul Gosar of Arizona tweeted last November, which depicted him killing a Democratic congresswoman, Alexandria Ocasio-Cortez, was one of the subtler examples. Ms Cheney and Mr Kinzinger were the only Republicans to back a Democratic motion to censure Mr Gosar, which caused a further deterioration in partisan relations.

Shaman you

Outside politics, there is more hope. The even-handed processing of so many hundreds of insurrectionist cases is a credit to the justice system. The police chiefs responsible for the Capitol's inadequate defences have been held accountable, and the building's security significantly beefed up. But, alas, that is a mixed blessing to those, like Ms Bustos, who ran for office to govern, not to fight.

She is one of 25 Democratic House members quitting politics, a decision she ascribes partly to the riot. "My husband's been in law enforcement for four decades and, you know, he said it's not going to get better out there," she says. "We talked it over with my three sons. None of them thought I should run again." ■

The Americas

Energy in Mexico

Back to the disco era

MEXICO CITY

President Andrés Manuel López Obrador resurrects policies from the 1970s

To hear Mexico's president, Andrés Manuel López Obrador, tell the tale, the situation is dire and there is no time to waste. The reforms to the energy industry his predecessor helped push through in 2014 are causing "grave damage"; the constitutional amendments he has presented to the Congress will "rescue" Mexico.

In fact, the opposite is true: it is Mr López Obrador's plans that are a grave threat, not only to the economy but also to the rule of law. In their current form, at least, they would make electricity both dirtier and more expensive, while damaging investor confidence and undermining institutions intended to keep an overweening government at bay.

Mr López Obrador, a left-leaning populist, sees the state as the mainstay of the economy, and energy as Mexico's leading industry. He therefore wants to reverse the reforms of recent years and restore the state-owned oil and power companies to complete primacy within their respective domains. The hitch is that the liberalisation of power generation, in particular, has been an enormous success. Firms that were allowed to buy their own power from private suppliers instead of the state electricity company, Comisión Federal de Electricidad (CFE), saw the price fall (see chart 1 on the next page). The power CFE itself bought at auction from private generation firms was some of the cheapest in the world. In 2014 electricity cost more in Mexico than in both China and Brazil, according to the World Bank; just two years later, Mexico's power was the least expensive.

Cheap power, in turn, helped spur the growth of Mexican industry, and especially of the *maquiladoras*, or foreign-owned manufacturing plants that have replaced oil as the mainstay of the Mexican economy in recent decades.

→ Also in this section

28 Brazil's political video games
30 Cuba's white gold
— Bello is away

America's trade disputes with China and the desire of big businesses to relocate factories closer to American consumers should provide a further boost to Mexican manufacturing—but not if Mr López Obrador imperils the power supply.

Under the current rules both CFE and private firms generate power. The agency that manages the grid prioritises the cheapest sources. Since many of CFE's power plants are old and inefficient, private firms do well out of this arrangement. So does the environment, as many of the private companies produce green power. By 2020 the generation of a kilowatt-hour of Mexican electricity emitted 7.6% less CO_2 than five years earlier.

All fired up

Mr López Obrador wants to change all of that. His constitutional amendments, which the lower house of Congress takes up this month, would restore CFE's monopoly on selling power to the final consumer. Companies that generate power for their own consumption, or that buy it directly from private generation firms, would have to stop immediately.

Although private firms would still be allowed to sell power to the grid, CFE's output would be prioritised, however expensive it was. The independent agency that manages the grid would be absorbed by the energy ministry, along with two other regulators. In effect, it would be up to CFE to decide from which firms to buy whatever supplementary power the grid required and to dictate prices. There would be no requirement for auctions or open tenders.

The impact of all this would be "catastrophic", says Oscar Ocampo of IMCO, a think-tank. Mr López Obrador's plans threaten at least $44bn-worth of private generation, of which $26bn is investment in renewables. Blackouts could follow, as CFE may not have the capacity to produce enough electricity to meet Mexico's needs. Even if there was enough of it, electricity would inevitably become much more expensive. CFE spends at least 40% more than its private rivals to generate a kilowatt-hour of power.

The government says blithely that ordinary Mexicans will not pay more for electricity. If it keeps its word, the state would have to absorb the enormous extra costs itself. CFE's accounts have long been in dreadful shape. Analysts reckon CFE would need to spend at least an extra 62bn pesos ($3bn) a year to generate the power required, not taking into account the need for new investment in generation or subsidies to hold down costs to consumers.

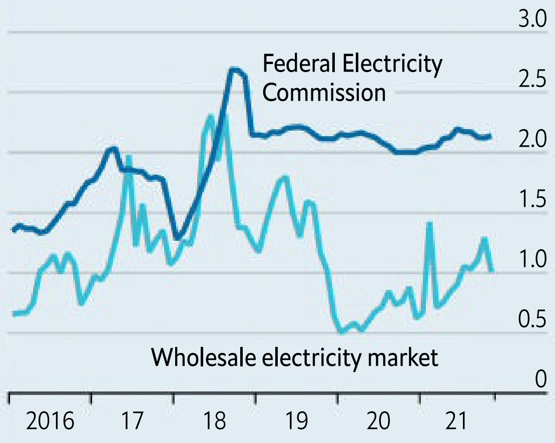
Mr López Obrador may shrug at that. After all, Petróleos Mexicanos (Pemex), the state-owned oil company, is the world's most indebted energy firm, with borrowings of $115bn. The government is propping it up with cash handouts equivalent to 1-2% of GDP. It is also winning tax breaks: the royalties it pays on the oil it extracts will fall from 54% to 40% (which is still high compared with Brazil's 15% rate, for example). The amount the government has earmarked for Pemex in this year's budget, 778bn pesos, is more than double what it plans to spend on education (364bn pesos).

There is little imminent prospect of either company returning any profits to the state. Pemex already struggles to cover interest payments on its debt and routine capital expenditure, let alone make big investments in exploration and new production. Its output has fallen from a peak of 3.5m barrels a day in 2003 to 1.7m today. If private companies are squeezed out of exploration—another element of Mr López Obrador's energy policy—Pemex will no longer benefit from their expertise, capital and risk-sharing on new projects. In December Pemex said it would halt exports of crude in 2023, to steer more oil to its refineries. But those currently lose money.

Power lines

Mexico, electricity prices, pesos per kWh

1

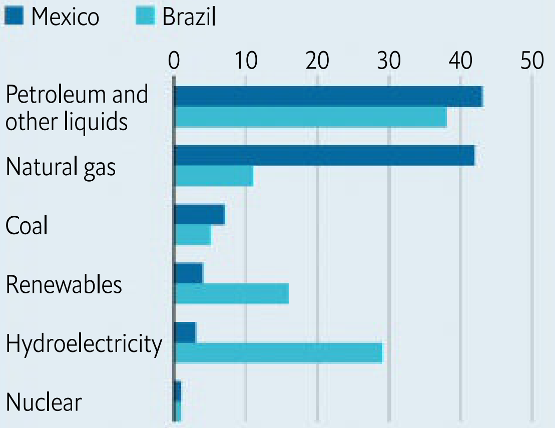


Sources: CRE; IMCO

Gas guzzler

Energy consumption, 2019, % of total

2



Source: EIA

The nationalist turn for the energy industry is not just bad for the books. It means that Mexico will not meet its pledge to produce 35% of electricity from clean sources by 2024—a target that analysts reckon it could exceed, thanks to its sunny and windy climate. The country's energy mix is dominated by oil and gas, with natural gas the main source for electricity (see chart 2). The type of fuel oil used in some of CFE's plants is so dirty that its use was banned in international shipping in 2020.

Worse, if energy costs rise and supplies become uncertain, manufacturers say they may no longer find Mexico a competitive place to make things. General Motors, an American car company, has said it will not invest further in Mexico if the laws do not encourage clean energy. Other multinationals are similarly wary.

Then there is the damage to the credibility of the state. "They are changing the rules of the game as they go along," complains Luis Cházaro, a lawmaker from the Party of the Democratic Revolution, which is in opposition. The law would retroactively cancel contracts, which might be as alarming to investors as higher power prices. The proposed changes would also probably breach several trade deals, including that with the United States and Canada. Indeed, the electricity bill signals the "retreat of Mexico as part of the rules-based international trade order", says Mr Ocampo.

Mr López Obrador may struggle to get the amendments approved, since he will have to win over some opposition votes to attain the necessary two-thirds majority in both houses. But even if watered down, his plans would be damaging. And even if the amendments founder, he will continue to pursue the same goals through ordinary legislation and administrative fiat.

Much damage has already been done, reckons Montserrat Ramiro, a former commissioner at the electricity regulator. The president has stuffed energy regulators with allies who delay permits for all firms but CFE and Pemex. (Luis Bravo of CFE counters that the regulators are redressing years of bias towards the private sector.) In July Mexico's tax agency barred more than 50 companies from importing petrol and other refined products, purportedly to crack down on tax evasion. Two months later it revoked or failed to renew important permits for Trafigura, a Swiss energy trader, and Windstar, an American one.

The fight against the president's proposals will be the "mother of all battles", says Odracir Barquera of the Business Co-ordinating Council, a private-sector lobby group, given the array of companies lined up against them. If Mr López Obrador wins, ordinary Mexicans will lose. ■

Brazil

Bolsonaryo v Lulo

SÃO PAULO

A divisive political culture finds expression in video games

When Felipe Rosa, a softly spoken 11-year-old from São Paulo, got bored playing "Minecraft", a video game, he downloaded a new game, "Kandidatos", that went viral when it was released in 2020. The game involves hand-to-hand combat between Brazilian politicians, including "Bolsonaryo," who looks just like Jair Bolsonaro, the right-wing president, and "Lulo," a carbon copy of leftist ex-president Luiz Inácio Lula da Silva. Rudimentary graphics and symphonic rock accompany their grunts, punches and kicks. Mr Rosa was delighted. "It's the crudeness that makes it cool," he says.

Gabriel Nunes, the game's creator, has been designing video games for over a decade but "didn't make a cent before 'Kandidatos'". It was downloaded 50,000 times the week it launched (for $0.99 on Steam, an online shop). It has now been bought some 170,000 times. Hyped online, occasionally by famous gamers, it joins a growing number of meme-like games by independent developers in Brazil whose main purpose is to mock politics. At least a dozen have hit the market in recent years.

This reflects not only the occasionally farcical nature of Brazilian politics but also the history of video games in the country, home to the world's fifth-biggest popula-

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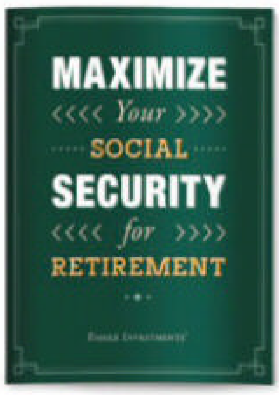

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tion of players. Bans on imports in the 1980s and steep taxes ever since have shaped its gaming culture in strange and unique ways. In 1987 Sega, a Japanese console manufacturer, teamed up with TecToy, a Brazilian toy company. Together they make a version of one of Sega's consoles, the Master System, which by 2016 had sold a whopping 8m units, millions more than any Sega console in the United States. Sega consoles are now obsolete in most of the world, but in Brazil they still sell.

Similarly Mr Rosa's father, Luiz Paulo, remembers buying pirated game cartridges smuggled in from Paraguay and playing knock-off or unofficial versions of games. "Bomba Patch", an indie adaptation (or "mod") of "Pro Evolution Soccer", a Japanese blockbuster, features Brazilian teams and gets an update each year. Indie games are currently experiencing a worldwide comeback. In Brazil they never went away.

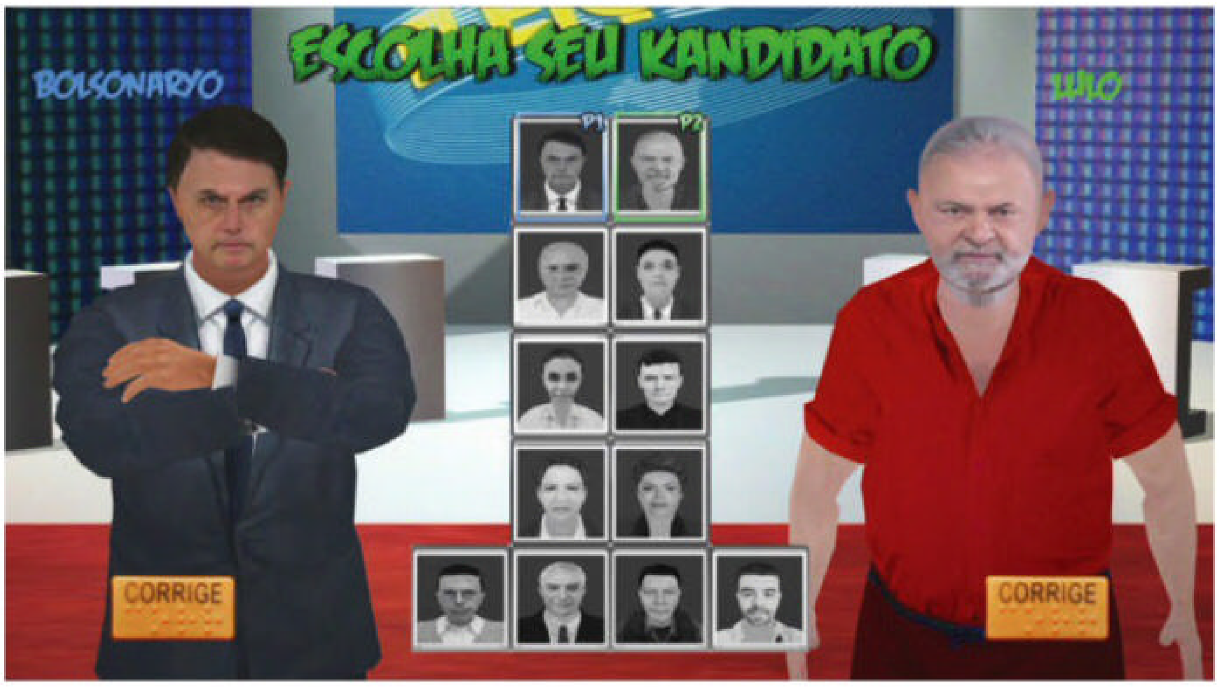
When, in the 2010s, a huge corruption scandal implicated nearly every political party in Brazil, it provided the perfect opportunity for the world of games to collide with that of politics, says Thiago Falcão of the Federal University of Paraíba. And as more people got mobile phones, the population of players grew. Today 96% of Brazilian gamers play some or all of the time on a mobile device. Phones, in turn, lend themselves to meme-like games that can go viral on messaging apps such as WhatsApp, which is used by a whopping 120m Brazilians (or 56% of the population).

Satirical political games have appeared in other countries, but such games are more numerous and popular in Brazil than anywhere else. And lately opportunities for farce have abounded. In December a former councillor and the mayor of a town in the Amazon decided to settle their differences by enacting a real-life version of "Kandidatos". They faced off in a boxing ring before hundreds of paying spectators. The mayor won, but is now being investigated for alleged use of public resources for the event.

Mr Nunes says he made "Kandidatos" in order to poke fun, not to serve a political purpose. He usually turns in a blank ballot in elections. But much of the satire in the video-game world more generally skews right. In one game, "Bolsomito 2K18," released during the campaign that resulted in Mr Bolsonaro's election, the president is "an upstanding citizen who has had enough of the spread of corruption and immorality". His avatar beats up black protesters and gay people. Prosecutors opened an anti-discrimination investigation into its creators. No charges were brought, but Steam made the game harder to find.

Serious gamers tend to be male, white and young. Many rejoice in immature, and often fairly offensive, humour, in much the same way as Mr Bolsonaro does. Before he was a presidential candidate he appeared on variety shows where his willingness to be the butt of jokes endeared him to ordinary folk. Isabela Kalil, an anthropologist who interviewed more than 1,000 right-wing Brazilians in the run-up to the election in 2018, notes that "nerds, gamers, hackers and haters" were among the first of 16 right-leaning categories to support him. Once in office he rewarded them by lowering taxes on video-game consoles three times, from 50% in 2019 to 20% now.

Left-wing politicians are catching on. In 2020 Guilherme Boulos, then a candidate for mayor of São Paulo, followed the example of Alexandria Ocasio-Cortez, a Democratic congresswoman in the United States, and live-streamed himself playing "Among Us", a multiplayer video game set in outer space. Nearly half a million people tuned in. The creators of "Políticos Memes Kombat", a game that is similar to "Kandidatos", decided to include Mr Boulos as one of four new characters in an update, due to be launched in time for the presidential election this year. ■



If only politics were this simple

Cuba

Crushing disappointment

The price of garlic is heady

"IF YOU WANT to make money in Cuba, buy garlic," says a farmer in Artemisa province, in western Cuba. Garlic, known as "white gold" for its value, is critical to the unique *sazón*, or seasoning, of Cuban food—which often has to be made with a few ingredients imaginatively thrown together. As with so many things on the communist island, however, it is in short supply. A lack of fertiliser and pesticide makes it especially hard to grow. And it is harvested only once a year, in January.

Every year garlic-sellers on the streets of Havana peddle bulbs from backpacks, as if selling fake luxury handbags or electronics. The price of garlic tends to boom around November and December, before more comes onto the (black) market. A pensioner in one part of the capital complains that a bulb now costs 25 pesos ($1) and 450g (1lb) costs 240 pesos, four times the price in September.

Another way to get the bulbs is through *ajeros*, or garlic resellers. They pay garlic farmers $50,000-100,000 to buy their whole harvest and then resell it to a network of other resellers, who in turn sell to smaller resellers and so on. *Ajero* kingpins make so much cash from these transactions that banks, especially the small ones out in the provinces, sometimes have to close to the public while they process the sacks of money being deposited. "You can recognise the big resellers by their cars," sighs the farmer in Artemisa.

Profiting from garlic is nothing new. In 1986 Fidel Castro, then Cuba's dictator, discovered that a garlic farmer was making $50,000 a year—ten times a local surgeon's wage at the time—by privately selling what he had left over after meeting his quota for the state agriculture system. Outraged to see that people were behaving like "capitalists in disguise", he closed the private farmers' markets where it was sold.

But the pandemic has exacerbated shortages of basic goods in Cuba, along with fertilisers, fungicide, seeds and supplies for animals. Thousands of rabbits died last summer in an outbreak of haemorrhagic disease. Pigs may be next; the country is on high alert following an outbreak of African swine fever in the Dominican Republic. Last year the government mooted eating guinea pigs, a popular food in parts of South America, but the idea was largely ridiculed. Then again, Cubans cannot live by allium alone. ■

Kazakhstan

Shouting at deaf old men

Fuel-price protests have sparked unrest that threatens the regime

When Kazakhstan's government resolved to end subsidies on liquefied petroleum gas (LPG) three years ago, the decision attracted little attention. Its leaders could not have guessed that the move would threaten the very existence of the regime that has ruled the Central Asian country since it became an independent republic in 1991.

Price controls had to go, officials explained at the time, to stimulate investment in a sector plagued with inefficiencies. Fuel producers had little incentive to increase supply when the system meant they ended up selling it at a loss. On January 1st fuel prices became fully market-based. The cost of LPG, which many Kazakhs use instead of petrol or diesel to run their cars, soon shot up, doubling in some places from 60 tenge ($0.14) a litre at the end of last year to 120 tenge by January 2nd.

Protests immediately broke out in Zhanaozen, a depressed town in the oil-rich western part of Kazakhstan. It did not take long for them to spread around the vast country, snowballing from a specific grievance about fuel prices into broader demands for regime change. By January 5th protesters had stormed buildings in Almaty, the largest city, and briefly occupied its airport. The president sacked his prime minister and declared a state of emergency. By the afternoon of January 6th at least 12 members of the security forces had been killed and hundreds injured in what authorities were describing as a terrorist attack carried out with international backing. "Dozens" of protesters died in the clashes, police said. Russian troops are arriving to help restore order.

Big protests are rare in Kazakhstan, which has a reputation for stability in a volatile region, mostly because the country's authoritarian rulers crack down harshly on public displays of disaffection. So it was all the more surprising when, on January 3rd, demonstrators in northern Nur-Sultan, the capital, in Almaty, the financial centre in the south, and in other towns came out in solidarity with their brethren in Zhanaozen, who complain that the country's vast oil wealth has done little to improve their living standards. This quickly turned into fury over wider economic grievances, including rising inflation and unemployment, and then to shouts of "*shal ket!*", or "old man out!"

The "old man" is Nursultan Nazarbayev, the octogenarian former president who steered Kazakhstan to independence when the Soviet Union collapsed and now occupies the role of elder statesman. He rules, since his resignation in 2019, in tandem with his handpicked successor, Kassym-Zhomart Tokayev. Some protesters want Mr Nazarbayev to be stripped of his status as Leader of the Nation, which affords him broad powers and privileges, including immunity from prosecution.

It does not help that the most visible symbol of the ruling elites' arrogance—the glittering new capital of Nur-Sultan—is named after the former president himself. There have long been quiet grumblings about Mr Nazarbayev's relatives and cronies enriching themselves with proceeds from the country's natural resources while citizens struggle with a high cost of living and meagre wages. The average salary is less than $7,000 a year. Despite promises of diversification, the economy relies heavily on natural resources. Those grum- ▸▸

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blings have now burst out into the open.

"Old man out" has taken on a broader meaning, too, targeting not just Mr Nazarbayev but the entire political establishment. Mr Tokayev, who on becoming president in 2019 promised to create what he called a "listening state", complete with democratic reform and political competition, has failed to deliver change. Stringent restrictions on civil liberties remain, and there are no opposition parties. Protesters have called for the rubber-stamp parliament to be prorogued and for urban and provincial leaders, who are currently appointed, to be elected.

The regime's first response was to reach for the carrot. On January 4th it promised to cut the price of fuel to below its pre-protest level. The president also ordered officials to regulate prices for six months, in effect reintroducing subsidies. The cabinet was dismissed, in line with demonstrators' demands. Yet that seemed only to embolden the protesters. Using makeshift weapons, they battled police, stormed Almaty's city hall and torched other official buildings in several cities and toppled a statue of Mr Nazarbayev in one town.

Next, the stick. Hundreds of people have been arrested. On January 6th Mr Tokayev extended nationwide a limited state of emergency declared the previous day. He also took control of the powerful Security Council from Mr Nazarbayev and fired Karim Masimov, the domestic intelligence chief, a stalwart ally of the old man, to impose his own control over security forces. Internet disruptions have been reported across the country. As dawn broke the country was under a total news blackout: all Kazakhstan-based websites were inaccessible and the usual social-media chatter had fallen silent.

In the hours before, Mr Tokayev had said that he was launching an "anti-terrorist operation" to beat back rebels who had seized weapons from gun shops. Some 350 members of the security forces had been injured, according to the interior ministry. Shooting and looting broke out overnight in Almaty. Police were battling foreign-trained terrorists outside the city, he claimed. Commentators loyal to President Vladimir Putin have suggested that the West is trying to foment a colour revolution in Kazakhstan. The aim of this imaginary plot is supposedly to destabilise Russia as it prepares to talk to NATO about its threats to invade Ukraine.

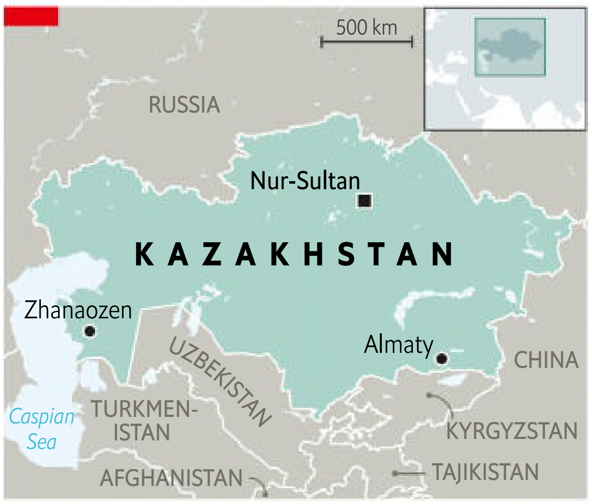
As the situation deteriorated, Mr Tokayev took the dramatic step of requesting assistance "in overcoming this terrorist threat" from the Collective Security Treaty Organisation (CSTO), a military alliance of six post-Soviet states formed in 1994. Nikol Pashinyan, the prime minister of Armenia, which currently chairs the CSTO, said that the bloc had decided to send peacekeeping forces "for a limited period, in order to stabilise and normalise the situation". It is the first time that the CSTO has invoked Article 4 of its treaty, which covers threats to national security including supposed "foreign interference".

Though the alliance has never before convened in a crisis, it conducted numerous joint exercises in the summer and autumn of last year, notes Rob Lee of King's College London, partly in response to the steady collapse of Afghanistan, which shares a border with the bloc. "The CSTO's rapid reaction forces should be better prepared to respond than normal", he says. Russian paratroopers were arriving in Kazakhstan as *The Economist* went to press.

CSTO troops would be used to guard infrastructure, according to one Russian lawmaker, freeing up Kazakh forces for the bloodier work of crushing protesters. Mr Tokayev may also be hoping that Russia's involvement will stiffen the spines of his security forces, reducing the likelihood of defections or a coup. But the decision to solicit outside help is a fateful step for the country. "Tokayev is throwing away Kazakhstan's sovereignty by asking for Russians to intervene," says Jen Brick Murtazashvili of the University of Pittsburgh.

Another complication is that many of the Russian military units tasked with responding to crises in Central Asia are currently sitting near the Ukrainian border, far from their home bases, as part of a Kremlin effort to intimidate a neighbour and squeeze NATO. Vladimir Putin, Russia's president, caught by surprise by events on his southern flank, might face a choice between diverting forces from the west, thus diluting his ability to make credible threats before crucial talks with America and NATO next week, or limiting the scope of any assistance to Kazakhstan.

Mr Tokayev has so far blamed internal provocateurs, outside forces, his own government and oil companies for the unrest. In a televised address on January 5th intended to convey resolve he said he would act "robustly" and reassured citizens that "whatever happens, I will remain in the capital". It is unclear whether that is what his country's citizens want to hear. ■



India and Omicron

Elections and infections

DELHI

Not enough lessons have been learnt from the devastating Delta wave of 2021

MANY INDIANS would have loved to slam the door on 2021 with a loud bang of good riddance. Instead, celebrations for this new year proved muted. As the highly contagious Omicron variant of covid-19 started spreading in late December police in Mumbai, the country's commercial hub, banned public gatherings. Several states, along with Delhi, the national capital, ordered night curfews.

But it was not just government-imposed social distancing that dampened revelry. Barely seven months have passed since a ferocious wave of the Delta variant racked the country. Covid has left some 5m Indians dead, according to *The Economist*'s excess-deaths tracker, the world's highest toll. Memories of loved ones gasping for breath, of overwhelmed hospitals turning away the dying and of the stench of mass cremations remain all too sharp. It was fear of a reprise of such terrors, more than of police *lathis*, that kept fireworks dry.

There is no doubt that India is in for another massive wave. Paul Kattuman of Cambridge University, one of the creators of an India covid tracker that correctly predicted last year's peak, describes the current growth trend as "super-exponential". The reproduction rate of the virus, or R, which has mostly remained below the replacement level of 1.0 since June, has from mid-December ticked inexorably upward, reaching 2.69 nationwide on January 5th, and a frightening 5.0 in the rural state of Jharkhand. In the same period the national tally of fresh daily cases rose more than 15 times, to nearly 91,000.

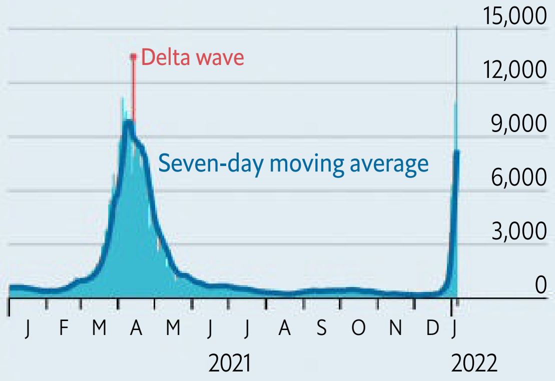
That is still a far cry from the 400,000 new cases a day recorded when the second wave crested last May. But it is only a matter of time before India scales this height again, and it is likely to be far below the true number. Systemic undercounting of cases and a pattern of spread from big cities mean that a better measure may be the proportion of PCR tests returning positive results. During last year's peak this briefly exceeded 25% across India, but by December 27th it had fallen to a low of 0.5%. By January 5th positivity rates in Mumbai, which is often ahead of the rest of the country, were again exceeding 25% (see chart on next page). In both Mumbai and Delhi (where positivity is also surging), Omicron is already the dominant strain.

However ominous the new wave, India is now much better prepared. Last April the ▸▸

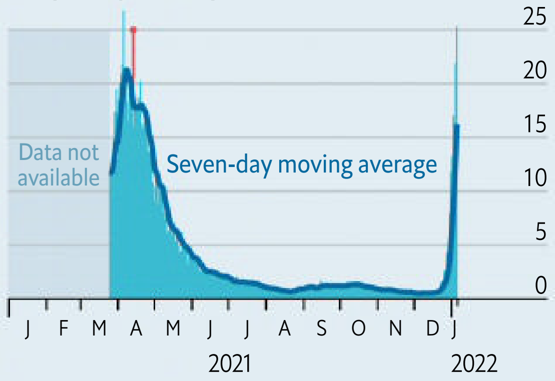
Warning signs

Mumbai, India, covid-19

Daily new cases



Daily test positivity rate, %



Source: Municipal Corporation of Greater Mumbai

country's vaccination campaign had scarcely begun; now, with around 1.45bn doses delivered, 44% of the population has been double-jabbed. Millions more have gained some resistance because of previous infection. A national sero-survey conducted in June and July found that 68% of Indians already carried covid antibodies. More recent antibody surveys revealed even higher levels of exposure: 87% in Mumbai in August and 97% in October in Delhi. Such studies cannot tell whether the antibodies came through vaccination or previous infection. But 80% of children in the Delhi study were found to be carrying antibodies. Since under-18s became eligible for vaccination only on January 3rd, this suggests that exposure to the virus has been extremely widespread.

In other words, despite a failure to provide booster shots—the government belatedly declared it would start supplying what it quaintly calls "precautionary doses" for vulnerable groups only on January 10th—Indians may enjoy a level of "hybrid immunity" comparable to countries with higher vaccination rates. This profile is similar to that of South Africa, where Omicron was first detected and where the wave is now receding. Epidemiologists are hoping that in India, too, the variant may prove to be less deadly than was at first feared.

There are other reasons for cautious optimism. India's medical system is relatively well prepared. Last year's nightmare provided valuable lessons. Doctors say their teams are now more efficient as well as better equipped. Disgraced by catastrophic shortfalls in medical oxygen, the government has massively increased supply and streamlined distribution. Dozens of hospitals now have their own production units, and the country's overall capacity is said to have grown by 50%. The network of private relief groups that sprang into action last year, providing everything from free meals to ambulance services to oxygen concentrators, is also ready for redeployment.

The same old story

But even as evidence grows that Omicron is indeed less likely to cause severe disease or death than other covid variants, doctors also warn of dangers. The sheer size of India's population, combined with crowded living conditions and the prevalence of factors such as high rates of malnutrition, diabetes and tuberculosis, could still place millions at high risk. As yet unprotected by booster shots, front-line workers are particularly exposed. At the best of times India has too few doctors, and too many concentrated in big cities. Even with milder symptoms and quicker recoveries, a flood of infections among medical staff could cripple the health care system.

By January 5th hospitals across the country had started recording growing staff shortages, prompting the government to cancel holidays and shorten quarantine rules for infected medics. The Supreme Court also speeded up hearings about quota rules for poor or low-caste medical students, which have stalled the induction of tens of thousands of badly needed hospital interns. "Getting reports of more and more health-care workers testing positive," tweeted a frustrated doctor from one rapidly filling covid unit. "We needed boosters much before this wave started…Nobody listens or understands."

This doctor is not the only medical professional concerned about inadequate or misguided government policy. Last year's wave left bureaucrats and politicians red-faced. They boasted about Indian-made vaccines while failing to supply enough to Indians, and dawdled over crucial needs such as oxygen or the release of data about the virus. Most egregiously Narendra Modi, the prime minister, and other top members of his party encouraged huge religious gatherings and campaigned vigorously in state elections, holding giant public rallies in spite of the obviously spreading virus.

This year's rising wave again coincides with heated election battles in several Indian states. Even as politicians ordered schools shut and gatherings banned, their own rallies have gone ahead. In Uttar Pradesh, India's most populous state and a crucial one for Mr Modi to hold in advance of the next national elections in 2024, barely 30% of adults are fully vaccinated. Campaigning has nevertheless proceeded uninterrupted, with the prime minister himself repeatedly appearing in crowds without a mask; on January 2nd it was to inaugurate a "sports university", and on January 9th he is scheduled to address a "mega rally" in the state capital, Lucknow.

Not that opposition politicians are setting a better example. The central government complains that states have touched only a fraction of the $3bn it earmarked for them to spend on preparations for a third wave. Only a day after marching unmasked through throngs at a rally in another poll-bound state, Punjab, Arvind Kejriwal, whose Aam Aadmi Party is challenging Mr Modi, tested positive for covid. The Congress party, meanwhile, only cancelled a series of girls' marathons in Uttar Pradesh, where its campaign is targeting women voters, after a crush at one event. Pandemic be damned, it seems: India's political show must go on. ■

Déjà vu all over again

Pacific relations

RAAring to go

SYDNEY AND TOKYO

Wary of China, Japan and Australia are cosying up to each other

When Abe Shinzo visited Australia in 2014, he became the first Japanese leader to address its parliament. Relations between the two countries have since blossomed. In 2018 Malcolm Turnbull, Australia's then-prime minister, posted a celebratory selfie of himself with Mr Abe and their wives after salvaging the Trans-Pacific Partnership (TPP), a big trade deal that America had ditched. Before the pandemic, Aussie tourists flocked to Japanese ski resorts. Japan was the first country that Scott Morrison, the current Australian leader, visited after the pandemic started. On January 6th Mr Morrison and Japan's new prime minister, Kishida Fumio, held a virtual summit to sign a long-awaited treaty to improve security co-operation.

China has done much to push the two together. When territorial disputes between Japan and China flared up in 2005, Australia saw it as "a bilateral problem, and we didn't want to be drawn into that problem", says Bruce Miller, a former Australian ambassador to Japan. And when Otsuka Taku, a Japanese lawmaker from the ruling Liberal Democratic Party, made his first official visit to Australia in 2013, he recalls being "shocked" at the extent of Chinese influence among his Australian peers. Since then, the situation has "drastically changed", says Mr Otsuka. These days, Australia shares many of Japan's insecurities about Chinese expansionism. It has also experienced China's economic coercion in the wake of its call for an independent inquiry into the origins of the pandemic.

Yet it is not only China's aggression that has brought Japan and Australia closer, but also concern about American reliability, says Shiro Armstrong of Australian National University in Canberra. Even as America demurs, Japan and Australia have continued to champion free trade: along with the CPTPP, as the revived TPP is known, they collaborated on the Regional Comprehensive Economic Partnership, another big Asian trade deal, which came into effect on January 1st. They are enhancing security ties with other partners too, both as a means of supplementing American power and of keeping America engaged by contributing more. Co-operation with India has grown, in part through the Quad, a grouping that also includes America. British warships visited Japan in 2021; Australia inked AUKUS, a new security treaty with America and Britain.

Japan and Australia have in recent years also ramped up bilateral contacts between their armed forces. The Reciprocal Access Agreement (RAA), the pact signed this week, cements the ever closer security relationship. The RAA creates a legal framework for the two militaries to operate in and around each others' territories, a process that used to require reams of paperwork and long periods of planning. That will spur more frequent and more realistic joint training, says Mr Otsuka, who chairs the security committee in Japan's lower house. It is the first such arrangement Japan has with any partner other than America. For Australia, the agreement will have more immediate practical significance than AUKUS, reckons Nick Bisley of La Trobe University in Melbourne.

A long and fruitful commercial relationship underlies the closer strategic ties. Japan has long bought loads of Australia's raw materials, including iron ore and coal, and spent heavily on the infrastructure, such as mines, to secure them: it is Australia's second-largest source of foreign investment and its third-largest trading partner. Australia, in turn, is Japan's largest energy supplier. Coal and gas are the core, but both countries have high hopes for Australian hydrogen playing a similar role as they eye decarbonisation.

Yet much must still be done to build on the newfound closeness. While the RAA elevates Japan and Australia's security partnership, it is far from a formal alliance. Both governments will also need to do more to reorient the energy trade towards greener sources. The risk, says Melanie Brock, a Tokyo-based Australian business consultant, is "that we assume that because we're close that we don't have to work at it." Realising the relationship's potential will require more than ski trips and high-profile summitry. ■

The best of mates

Myanmar's civil war

Goodbye to all that

SINGAPORE

A growing number of soldiers are deserting the Burmese army

Ange Lay tried to contain his anxiety one morning last July as he, his wife and their daughter drove off the military base where they lived. A sergeant in the Burmese army, Mr Ange Lay had received permission from his superiors to visit a relative. Instead, he and his family wended their way to territory controlled by a rebel group, changing cars several times en route to shake off any followers.

Mr Ange Lay had been dissatisfied with life in the army, or the Tatmadaw as it is known, for years. Officers treated low-ranking soldiers like their servants. Anyone who complained got a punch in the head or time in a cell. We "lived in fear", he says. And after toiling in the notoriously corrupt army for 15 years, Mr Ange Lay had little to show for it. "The army is taking the country down with it," he recalls telling a fellow soldier when he learnt that the Tatmadaw had seized power in a coup. Eventually he decided to defect.

There are many others like Mr Ange Lay. Since the coup, some 2,000 soldiers and 6,000 police officers have fled to territory controlled by rebel forces, according to the National Unity Government (NUG), a shadow government made up of deposed parliamentarians which helps organise resistance to the junta. It is likely that other soldiers have gone into hiding or fled the country. Many of those who have crossed over to the resistance have been helped by People's Embrace and People's Soldiers, organisations started by former soldiers who help troops flee. Both co-ordinate their activities with the NUG and some of the sympathetic ethnic-minority rebel groups in the country's borderlands.

Soldiers who contact them, through an encrypted messaging app, have either already decided to defect or are considering it. Volunteers, many of whom are former soldiers themselves, urge fence-straddlers to consider how future generations of Burmese will think of them if they remain in the army. They provide would-be defectors with instructions on how to locate "liberated" territory and help them get there. Once they have arrived they are provided with food, housing, a stipend and medical attention, funded by the NUG and donations from the public.

"[The] defection programme is vital," says Yee Mon, the NUG's defence minister, arguing that it may help bring about the downfall of the junta and in a way that

▸▸

minimises violence. Yet he admits that only a tiny proportion of servicemen have actually deserted so far. The Tatmadaw is thought to number some 300,000 soldiers and the police around 80,000. Nyi Thu Ta, a former army captain and a founder of People’s Soldiers, says that at least 10,000 soldiers would need to defect for “a crack in the military to become obvious”.

Many soldiers in the Tatmadaw would like to flee but cannot for various reasons, according to the NUG. The Tatmadaw closely monitors the rank and file. Contact with the world outside the barracks is heavily restricted. There are internet blackouts in some camps. Most soldiers are no longer allowed to leave the barracks without permission. Before the coup, deserters would get five years in prison. Now they would most likely be shot.

But the NUG remains upbeat. Tatmadaw troop numbers are misleading, says Kim Jolliffe, an analyst. “A huge number” of soldiers “are just guys with guns with very limited training”. Morale is flagging, too. The force faces more opposition than it has encountered in a generation, and is fighting members of its own ethnic group, the Bamar majority. It is struggling to recruit.

For every soldier who defects to the resistance, there are likely to be far more who desert. According to Ye Myo Hein of the Wilson Centre, an American think-tank, between 5,000 and 7,000 soldiers abandoned the army every year before the coup. The figure in 2021 was probably much higher. No matter why they run, fleeing soldiers will recognise how Mr Ange Lay felt when he drove out of the barracks. “I felt I was so free...It was like dropping something, a burden I had been shouldering for so many years.” ■

Banyan The forgettable populist

Rodrigo Duterte, the Philippines’ cantankerous strongman, leaves little behind

NO PRESIDENT OF the Philippines since Ferdinand Marcos, the late dictator, has held such a grip on power as the authoritarian Rodrigo Duterte. Nor has any appeared so unconcerned at accomplishing so little. His promises of constitutional change, devolving power from the centre in Manila, came to nothing. His kowtowing to President Xi Jinping of China brought little investment and much resentment. By his own admission, his war on drugs has failed—though at a human cost, according to the UN’s human-rights body, of at least 8,000 dead in vigilante-style killings. His administration has mishandled covid-19, with less than half of Filipinos fully vaccinated and the economy nearly 6% smaller than before the pandemic.

The gulf between his putative power and what he has done with it is a central feature of Mr Duterte’s six-year rule, which comes to an end after elections in May (the constitution mandates a single presidential term). Yet the president’s Teflon approval rating presents a conundrum: though it has lately dipped a bit, it remains impressive at 72%, according to Pulse Asia Research, a pollster. Most other democratically elected presidents in the Philippines started off popular, too, but then quickly crashed.

Perhaps the conundrum is in reality a chimera. Ronald Mendoza of Ateneo de Manila University suggests that herd behaviour plays a powerful part in surveys of popular opinion among Filipinos. Probably more than in most places, individual voting preferences and personal political expressions are influenced by what the neighbours think. That is unsurprising in a political system with powerful actors. Conformism is not just acceptable; bucking it carries risks with an authoritarian in charge. But the herd may already be moving on, notwithstanding the poll ratings. After Mr Duterte declared in November that he would run for vice-president—a constitutionally dubious move—so disapproving was the popular reaction that he quickly withdrew.

To the political classes he is already a has-been. They are abandoning him in droves, starting with his own daughter, Sara Duterte. Mayor, like her father before her, of the southern city of Davao, she was the most popular presidential possible and the natural choice for the ruling party’s candidate. But Ms Duterte’s relations with her father have long been strained (she blames him for her parents’ divorce). She detests his henchmen and has no desire to favour them.

Choosing to run for vice-president rather than president, she has thrown her lot behind the presidential bid of Ferdinand Marcos’s 64-year-old son, who goes by “Bongbong”. As senator, Mr Marcos and Mr Duterte had been allies in authoritarianism: the president even had the late kleptocrat reburied, with full military honours, in the national Cemetery of the Heroes. These days Mr Duterte snipes at Mr Marcos, accusing him, variously, of being weak, pro-communist and a coke snorter (Mr Marcos denies the claims).

Two other political dynasts and former presidents, Joseph Estrada and, especially, Gloria Macapagal Arroyo, back the Marcos-Sara Duterte ticket. Meanwhile, Mr Duterte’s own party is disintegrating. His favoured nominee and chief henchman, Senator Bong Go, has withdrawn from the presidential race. The ruling party now has nobody contesting the election. Only one candidate, Isko Moreno, the mayor of Manila, seems hungry for Mr Duterte’s endorsement. But that is in order to win over his followers, mainly among the poorer classes, not to inherit his legacy. Unlike the president, Mr Moreno, who grew up in the capital’s slums, holds moderate political views and evinces competence.

The final months of Mr Duterte’s presidency look likely to be taken up with a growing scandal concerning a pharmaceutical company with close ties to the administration that was given outsize government contracts. Corruption, in other words, colours this presidency just as it did previous ones, despite his promises to stamp it out.

Mr Duterte, who rose to power by presenting himself as an outsider, a foul-mouthed defender of ordinary folk, is not the mould-breaker he claimed to be. True, he is the first president from Mindanao in the far south. But for all his current strains with his daughter, he is in many ways typical of the political families that have long dominated the Philippines, acting like royalty and responsible, as Mr Mendoza puts it, for bad governance, stagnation and a sense of impunity. Like many of his predecessors, Mr Duterte will leave little behind.

Hong Kong's media

Showing who's boss

A once-vibrant press corps is battered into dull conformity

Life as an independent journalist in Hong Kong, long hard, is becoming impossible. On December 29th *Stand News*, the territory's leading pro-democracy news outlet, was forced to shut after hundreds of police raided its office, froze its assets and arrested seven people. The current and former editors were charged with conspiracy to publish seditious content and denied bail. Fearing for their reporters' safety, two other news sites, *Citizen News* and *Mad Dog Daily*, halted operations on January 4th.

After the enforced closure in Hong Kong last June of *Apple Daily* newspaper, *Stand* and *Citizen* were the two most popular Chinese-language, pro-democracy outlets. Both rose to prominence in the protest movement in 2019, and were known for their popular live-streams and comprehensive coverage. A *Stand* reporter, Gwyneth Ho, who was attacked while covering the protests, entered politics and is now in jail under a national-security law that China imposed in 2020. The chief editor at *Citizen*, Daisy Li, said they were "no longer able to say for sure" what may violate the security law. Hong Kong's chief executive, Carrie Lam, denied it had anything to do with the closures.

Citizen had been a lifeboat for independent journalists, rescuing some who had resigned or been fired from other outlets, including *Apple Daily*, Cable TV and RTHK, the public broadcaster (the output of which now resembles that of Chinese state media). Journalists posted photos of farewell cards: "We fought the good fight, we finished the course, we kept the faith."

Controls on the press are likely to tighten. Hong Kong's security chief, Chris Tang, said in December that he "fully supported" the introduction of "fake news" regulations. Traditional news outlets have grown increasingly cautious, while the influence of Communist-backed newspapers such as *Wen Wei Po* and *Ta Kung Pao* has grown.

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The last significant independent news outlet in the city is Hong Kong Free Press, an English-language news site. Almost half of around 100 respondents surveyed by Hong Kong's Foreign Correspondents' Club were considering leaving because of concerns over press freedom. China's foreign ministry accused the club of "sowing discord".

The onslaught on free speech extends beyond independent news organisations. On January 4th Chow Hang Tung, an activist barrister, was sentenced to 15 months in jail for arranging a commemoration of the Beijing massacre of June 1989. A vigil for victims in 2020 led to prison terms for 23 other activists. In December three universities removed monuments inspired by the massacre. Even Disney+, a streaming service, removed from Hong Kong broadcasts of an episode of "The Simpsons" that mentions the massacre and refers to Mao Zedong as "a little angel that killed 50m people". With every passing day, Hong Kong becomes more like the rest of China.

Yet Hong Kong's press used to be vital in helping the world understand China. Its journalists have broken many important stories about the country. No longer. Hardly any Hong Kong outlets, for example, covered the political scandal that followed the accusation in November 2021 by Peng Shuai, a famous Chinese tennis player, of sexual assault by a senior Chinese official. *Citizen* and *Stand* were exceptions.

The space for civil society is also shrinking. Some 60 pro-democracy grassroots organisations were forced to close in 2021. On January 3rd members of a new Legislative Council were sworn in. Hong Kong's emblem, the bauhinia flower, was replaced in the chamber by China's national crest. A band played the Chinese national anthem. Three new members chose to take their oaths in Mandarin, rather than Cantonese, the traditional language of Hong Kong. The elections in December had been radically different from previous ones, with only 20 of the 90 seats directly elected. After a vote in November 2019 when the pro-democracy camp won nearly 90% of the seats, the government overhauled the electoral system. Most opposition politicians are now either in jail or have gone into exile.

A record-low number of voters cast ballots in December's "patriots-only" race. All but one of the 90 seats were won by candidates from the pro-establishment camp. The government warned that anyone calling on others to cast invalid votes may be in breach of the security law. At least ten people were arrested for violating election laws. The government threatened the *Wall Street Journal* with being in breach of one after it published an editorial entitled "Hong Kong Says Vote—or Else".

Citizen's China team, widely regarded as the best in Hong Kong, released their last 38-minute episode on January 3rd. It followed Zhang Zhan, a citizen journalist who covered the early days of covid-19 in Wuhan and is now dying in jail on a hunger-strike. "If the truth doesn't come out, the lies win," she says, interviewed in a car. "The liars," she goes on, looking off-camera, "will turn lies into truth." ■

The UN and human rights

Geneva discords

America may seek a human-rights showdown with China

LAST YEAR the Human Rights Council in Geneva passed resolutions condemning abuses in Afghanistan, Burundi, Eritrea, Ethiopia, Myanmar, Sudan and Syria. But as in every other year since its creation in 2006, the United Nations body was silent on China. Fearful of reprisal, and uncertain of victory, member governments have been reluctant even to propose resolutions condemning, say, the erosion of civil liberties in Hong Kong or the harsh repression of Uyghurs in Xinjiang.

With the new year comes the possibility of change. On January 1st America took a seat on the council for the first time since 2018, when Donald Trump left it in a huff over its repeated criticisms of Israel. Human-rights activists hope that under President Joe Biden, America will at last press the UN to shine a light on China. They may be disappointed yet again. China also has a seat on the council, and has a solid record of staving off rebukes from the world body. A great-power showdown may be in the offing in Geneva, but it is far from clear that America will win.

China's Communist rulers have long made stifling criticism of themselves a central goal of foreign policy. That has become harder in recent years. The regime's horrific treatment of Uyghurs and the crackdown in Hong Kong have prompted condemnation and sanctions from rich democracies (and retaliatory sanctions from China). America went as far as to label China's actions in Xinjiang "genocide", though China's government is brutally persecuting the Uyghurs, not slaughtering them. Like a number of other countries, America will not send an official delegation to the Winter Olympics in Beijing in February.

At the UN dozens of governments—including America's, Germany's and Britain's—have made annual joint statements decrying China's behaviour, and calling for free access to Xinjiang for Michelle Bachelet, the UN's high commissioner for human rights. (She has had to investigate without going there.) Independent human-rights experts appointed by the UN have also issued a rare statement deploring China's abuses in Hong Kong, Tibet and Xinjiang.

But UN institutions have said and done nothing about China. There has never been any chance of action against China in the Security Council, where China holds a veto. Under Xi Jinping, China has become active and influential in the organisation, placing diplomats in senior and junior jobs throughout the entire UN system. And China is now the second-largest contributor, after America, to the UN's general budget.

The 47-member Human Rights Council, in theory, is free to speak up. It has rotating temporary members and no vetoes. But several egregious abusers sit on the council, as do many countries with strong economic ties with China. Diplomats say China often threatens retaliation against countries that criticise it, and offers rewards for taking its side—typically aid, loans or investment. In June Ukraine backed out of a joint statement criticising China, organised in Geneva by council members, after Chinese diplomats reportedly threatened to withhold coronavirus vaccines from the country. John Fisher, the head of the Geneva office of Human Rights Watch, an NGO, says some countries that publicly back China are "quite frank with us in the corridors, that they can't afford to be seen to cross China".

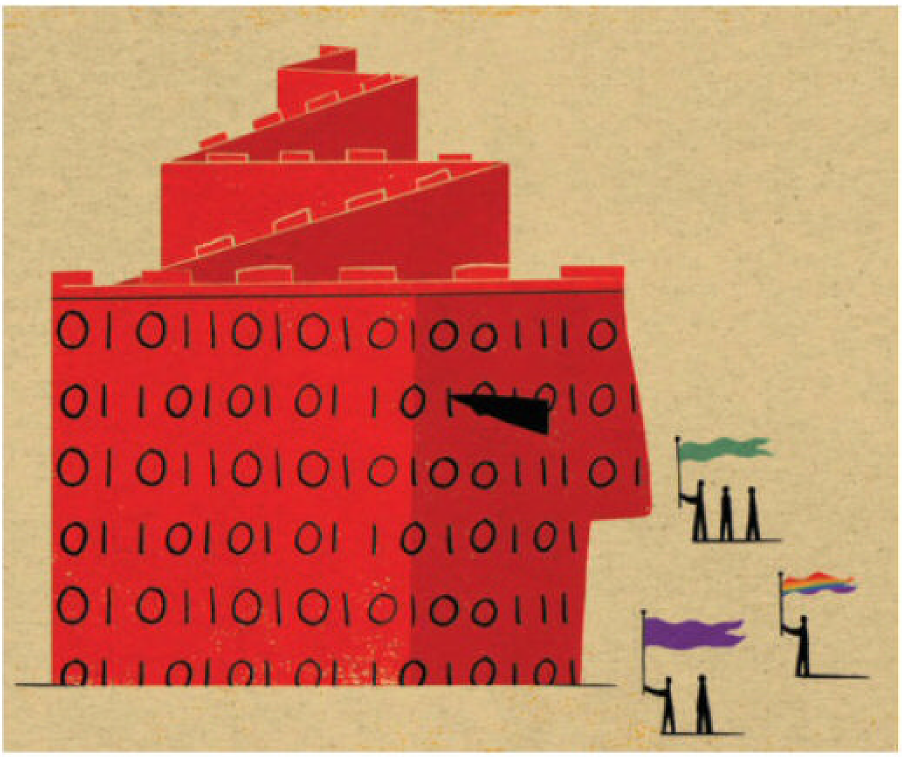
America's return should help matters. Under Mr Biden American diplomats again took an active role in Geneva in 2021, and won a seat on the council for a three-year term from 2022. (Michèle Taylor, appointed ambassador by Mr Biden to fill it, is still awaiting Senate confirmation.) In 2021 America's friends in Geneva won some minor symbolic victories. In October Britain managed to amend a Chinese resolution about colonialism, which was intended as a poke in the eye to Western powers, so that it could be read also as implicit criticism of China's treatment of Uyghurs. America and its allies are also busily urging Ms Bachelet to produce her long-awaited report on Xinjiang, which would be useful fodder for the council.

But it remains unclear if the Biden administration will press ahead with a resolution against China in its first year back. Some governments inclined to support America worry that a confrontation with China would polarise members and jeopardise the council's other work. And a resolution might be defeated, which might embolden China. "I know the US diplomats here are constantly thinking about numbers, about would they get something through," says Marc Limon of Universal Rights Group, a think-tank in Geneva.

They are right to worry. For years after the massacre in Beijing in 1989, America and its allies tried to get a resolution on China through the UN Commission on Human Rights, the council's predecessor. Only once, in 1995, did one get as far as a vote of the full commission; it failed by a margin of one. And these days China has much more weight to throw around. "Nobody likes a bully," Mr Fisher says. True enough; but bullies still often get their way. ■

Chaguan | For-profit paranoia

China's online nationalists see hostile foreign forces at every turn



An anxious world has long worried that rising nationalism might one day lead ordinary Chinese—especially the young—to outbursts of uncontrollable rage. If recent months are any guide, outsiders missed a more insidious threat: that anti-foreign paranoia would become a nasty but profitable game.

These are frightening times for Chinese civil-society activists, non-governmental organisations (NGOs) and private businesses that see their role as building bridges between China and other countries. Nationalist bloggers, supported at times by media outlets controlled by the Communist Party and the People's Liberation Army, have spent months denouncing groups and individual campaigners for receiving foreign grants, or merely for relaying foreign concerns about China's growing impact on the world, even in such relatively safe fields as the environment.

Last year Paperclip, a maker of popular science videos, was attacked by online nationalists and driven out of business, accused of spreading anti-China hatred with a film noting that China is a big buyer of Brazilian soyabeans linked to deforestation in the Amazon, and saying that eating less meat is good for the planet. Online celebrities have been called race traitors for making videos about over-fishing, some of them for a British-headquartered charity, in which they urged Chinese to consume seafood more responsibly. Nationalists detect an "evil" agenda to deny China protein that Americans and Europeans wish to keep for themselves.

China House, a social enterprise based in Shanghai that promotes sustainable development in Africa, and that offers young Chinese opportunities to volunteer to help marginalised folk, faces ongoing attacks. It drew ire for drawing attention to discrimination faced by African migrants in southern China, and for investigating Chinese buyers of illegal ivory. Sai Lei, a blogger behind some of the loudest recent campaigns, declared China House's founder an *er guizi*, a contemptuous term for collaborators with Japanese occupiers in the 1930s and 1940s. Reposted by the Communist Youth League, his video has to date been viewed 5m times.

A veteran of the NGO world calls this the worst time for Chinese civil society since 1989. Yet this atmosphere of fear was not triggered by new government policies, or by a wave of arrests. Instead, disconcertingly, some of the most damaging attacks came from previously little-known social-media entrepreneurs. Still more shockingly, the secret weapon of these bloggers is to make anti-foreign bigotry fun. Their core audience is young men aged 18-25. If followers are initially hooked by videos denouncing "anti-China traitors", their attention is kept with nationalist memes, conspiracy theories and dark in-jokes. Calling targets *er guizi* is only a start. Because state security services offer rewards of up to 500,000 yuan ($78,700) for reporting agents of a foreign power, those Chinese deemed unpatriotic are mocked online as "a walking 500,000" in anticipation of their denunciation as spies, or simply "500,000". Nationalism has become an entertainment industry. In the words of a Chinese liberal whose employer was targeted last year, nationalists discovered that videos about "anti-China" treachery generate clicks. "If you have a lot of clicks you become influential, and influence drives revenues."

Chaguan asked Sai Lei why he started making nationalist videos, after years of making explainer films about science and cars. Before agreeing to a telephone interview the 30-year-old, whose real name is Li Sirui, asked for questions in advance, citing his distrust of foreign media. He described his suspicion, starting in 2020, that a hidden agenda lay behind what seemed to be growing criticism of China. While relating his story, Mr Li mixed together many things that shocked him: comments by President Donald Trump about covid-19; BBC news reports about alleged forced labour in Xinjiang's cotton industry; and unsourced titbits that he had "read somewhere", such as a claim that pandemic face-masks donated by China "have Huawei chips in them". He called such claims "very clearly fake news" and added, "We need to be vigilant as to what the intent is behind all this." He insisted that his campaigns are not co-ordinated with officials in advance. "We are a private company, we're not connected to the government."

In this grim moment, those under fire are struggling to discern how closely clickbait nationalism aligns with the party's agenda. In the 1980s and 1990s overseas NGOs and foundations were welcomed as they brought foreign economists and legal scholars to China and funded scholarships for Chinese to study in the West. That era is over. Today's Chinese leaders think the West at once less useful as a source of knowledge and more likely to be hostile.

Telling the Chinese that every foreigner is a potential spy

Now that they have fewer opportunities to co-operate with domestic reformers inside China, some international NGOs have pivoted to lobbying China to be a more responsible global actor, on issues from climate change to illegal fishing far from home. That is a more confrontational role for outsiders to play. Pushing back at critics creates synergies between click-seeking online nationalists and national-security hawks, who never believed that foreigners would help China without expecting something in return.

In November law-enforcement officials accused Rendu Ocean, a non-profit that surveys marine pollution around China's coastline, of collecting oceanic data that could be used by spies. Later that month the *Global Times*, a tabloid often given exclusives by state security agencies, warned Chinese working for environmental NGOs that they may be unwittingly aiding foreign "espionage activities", for instance when they host academic forums exploring China's intentions in climate negotiations. Such hostility sits awkwardly with President Xi Jinping's stated ambition for China to lead the world in "ecological civilisation". For now delegitimising critics with foreign links is useful. Whether that dynamic can easily be reversed is a problem the party will face another day. ■

Middle East & Africa

African economies

When you are in a hole...

KOIDU

How to reduce the continent's reliance on commodities

IN EASTERN SIERRA LEONE six shoeless men thwack shovels into a bank of reddish earth and heave the dirt into a stagnant pond. They hope to find diamonds. Even if they do, they will not strike it rich. The men are paid about $0.90 a day by a backer who bought the licence to mine and who keeps 70% of anything they find. The remainder adds up, on average, to about $135 a year each, says one. Ibrahim, a 25-year-old wearing a sodden sock to protect his foot from the metal shovel, is a third-generation miner. He does not earn enough to send his children to school. "If I cannot support my children to be educated, how can I be sure they will not come here, too?" he asks.

Like Ibrahim's family, many African economies have relied too much on raw materials for too long. The UN defines a country as dependent on commodities if they are more than three-fifths of its physical exports. Fully 83% of African countries meet that threshold, up from 77% a decade ago. Some depend on produce such as tea, but most rely on mining or on pumping oil. When commodities crashed in 2015, foreign direct investment (FDI) and growth tumbled and have yet to fully recover.

Broad averages obscure some of the progress that has been made to diversify economies. Over the past decade resources have become less important to GDP. The share of commodities in goods exports from the continent as a whole has fallen, too. And in countries such as Botswana and Malawi, services have grown strongly. Even manufacturing is rebounding.

Yet Africa has a long way to go if it is to break free of the resource curse. In countries rich in diamonds or oil, political power can be a licence to loot. So unscrupulous folk are tempted to grab and hang on to it by any means available. Resource-rich countries are more likely to suffer dictatorships, and also tend to have more and longer civil wars. In Sierra Leone, for example, diamonds fuelled a bloody conflict that dragged on for 11 years.

Commodity prices leap and fall, leading to booms and busts. In Sierra Leone the normally sober IMF, excited by two new iron-ore mines and high prices, forecast growth of 51% for 2012. That spurred the government to splash out. But GDP that year grew by 15%. In 2014 iron-ore prices plunged and the mines closed. The economy, which was also hit by Ebola, shrank by 20% in 2015. "When the mine stops, it's bad for business," says Idrissa, who sells bags in Lunsar, a mining town.

Oil and minerals create few jobs. At a gold mine in Sierra Leone the Chinese manager's six ducks watch as a solitary red lorry dumps rubble. The avian observers outnumber the workers on duty. Across this country of 8m people, about 8,000 work in commercial mines. Cash crops create more jobs, but, without processing, do relatively little to improve productivity (which is needed to make a country rich).

Worse still, commodities exports can often hold back the rest of the economy by pushing the exchange rate up and making other exports uncompetitive. Every extra dollar in foreign currency earned from exporting resources reduces non-resource exports by $0.74, reckon Torfinn Harding of the NHH Norwegian School of Econom-

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ics and Anthony Venables of Oxford University. So tight is this straitjacket that Michael Ross of the University of California found that among 38 big oil exporters, neither good government nor democracy has any solid relation with diversification. The only thing that correlates is having less oil.

Yet it is too easy to blame economics alone. "The fault, dear Brutus, is not in our stars but in ourselves," quips Herbert M'cleod, who is based in Sierra Leone for the International Growth Centre, a research outfit. Governments often spend windfalls from commodities on fat salaries rather than investing them in infrastructure or education. They are "eating the future", laments Paul Collier of Oxford University. All too often when cash is tight, politicians try to renegotiate existing deals to get more tax, or simply grab mining or oil companies. "Let's own the minerals ourselves," muses Jacob Jusu Saffa, the chief minister (ie, prime minister) of Sierra Leone, in frustration at the lack of revenue. "Let's own the companies." Yet the result of state ownership is usually idle or unprofitable mines and angry investors who take their money and skills elsewhere.

Often overlooked is the reality that some politicians simply do not want to diversify. Money from oil tends to go through state coffers, where greedy hands can skim it off. Politically connected bigwigs often benefit in other ways too, says Rabah Arezki, a former chief economist at the African Development Bank. In many cases imports, which tend to jump during commodity booms, are controlled by a few big players. If there is little competition from domestic producers, they can bump up prices and gouge ordinary folk. As long as they share some of this wealth with their friends in politics, the government will do little to encourage local production. In any case, creating, say, a clothing industry from scratch is slow, so there is little reason for politicians to put in the effort if the credit will be claimed by their successors.

Even so, it is possible for governments to manage their commodities better. One basic principle, especially for things like oil and minerals that will run out, is to turn riches in the ground into other sources of wealth, such as roads or an educated population. The World Bank now argues that, even if countries cannot diversify their exports, they will still be making progress if they diversify their sources of wealth.

Sierra Leone's government is taking note. It now spends about 21% of its budget on education, up from 13% in 2017. As a result, more youngsters are passing their final exams than ever before. Mining began in Sierra Leone about a century ago. "If we had invested in humans for a hundred years," sighs David Moinina Sengeh, the education minister, "we would be in a much better place today." ■

I'M PROUD TO BE A VIRGIN.
THAT'S MY WAY OF STOPPING HIV.
WHAT ABOUT YOU?
USAID
Obulamu?

Uganda

The birds and the "be quiet"

A court unbans sex education

IN 2016 UGANDAN officials burst into the halls of Green Hill Academy, a highly regarded primary school in Kampala, Uganda's capital. They were on a curious mission. The minister for ethics and integrity had ordered them to seize copies of Jacqueline Wilson's "Love Lessons", a book about how a 14-year-old girl called Prudence falls in love with her art teacher. Conservative Ugandans threw a fit, fretting that "erotic" and "distorted" books were brainwashing their children. Within months all forms of sex education were banned. Last November a court lifted the parliamentary ban and gave the education ministry homework—to write a new policy on how it will teach children about sex.

The court case was not without surprises. Ismail Mulindwa, a senior official in the ministry, argued that teaching young people about sex could lead them to masturbate or become homosexual. (Presumably he thought these were bad things.) Conservative views on sex education start at the top. President Yoweri Museveni and his wife Janet, the minister of education, have long promoted celibacy as the best way to prevent sexually transmitted diseases. Both are against condoms, arguing they promote promiscuity. And the first lady seems to think that contraceptive pills not only fail to prevent pregnancy but also erode morals, turning Ugandans into sex-crazed people who "have sex, take pills, conceive and abort".

Ignorance is risky. Though deaths from AIDS, a disease caused by the HIV virus, have fallen sharply, partly because many people with it are now getting treated, the virus is still a big cause of death in Uganda. Less than half of young Ugandans know how to avoid catching HIV while having sex. Few seem to know much about contraception either. Around a quarter of teenage girls are pregnant or already have a child. Some 15% are married by the age of 15; around half have tied the knot by 18.

These alarming figures have been exacerbated by the government's blundering response to covid-19. It shut schools at the start of the pandemic almost two years ago and is only reopening them this month. By June last year the teenage-pregnancy rate had jumped by 17% from March 2020.

Officials drafting the new policy could perhaps learn from past mistakes. An earlier framework in 2018 suggested lifting the ban on sex education. However, it also suggested teaching children that the best way of not catching HIV is not to have sex. It barely mentioned contraception. All it said about masturbation was that no one should do it. Its only reference to gay sex was the name of the law banning it.

The framework mentioned God 62 times and made "God-fearing" its main guiding principle. Yet some pious folk were still not satisfied. Some Muslims felt the policy was too Christian; some Christians thought it was not conservative enough. The Reverend Stanley Ntagali, the archbishop of the Anglican Church of Uganda, denounced the framework as part of the "UN's pro-promiscuity, pro-gay, pro-abortion sexual agenda". A coalition of religious leaders agreed on only one thing: to reject the policy altogether.

Officials drafting the new framework might consider what has worked elsewhere. UNESCO has found that teaching young people about condoms is far more effective at curbing pregnancies, HIV and other sexually transmitted diseases than only teaching them abstinence. A better framework should also try to help young people avoid exploitative or violent relationships, says Rose Wakikona of the Centre for Health, Human Rights and Development, a Ugandan non-profit organisation that brought the case that overturned the ban. She describes a separate case of a nine-year-old rape victim, who testified that a man "slept on her" because she was unable to describe the act.

Education is a start, but it is only one piece of the puzzle. Some 28% of married Ugandan women who want to use contraceptives cannot get them, making Uganda's "unmet need" for contraception higher than the average for sub-Saharan Africa, where 25% still do not get it. It is not just the education ministry that has plenty of homework to finish. ■

South Africa

How to capture a state

An inquiry shows how graft flourished under Jacob Zuma

It was meant to last no more than six months, but the more muck it raked, the more it found. Four years after it was appointed to investigate allegations of "state capture" during the presidency of Jacob Zuma (2009-2018), a judicial commission headed by South Africa's deputy chief justice, Raymond Zondo, has released the first volume of its findings. It is damning, alleging in forensic detail that Mr Zuma and his friends set about taking over state-owned firms and government institutions in order to siphon cash out of them.

That the commission uncovered a mountain of corruption will not surprise many South Africans. Nor will the allegation that the former president seems to have been in the thick of it: well before he reached the top, Mr Zuma was already facing charges of fraud, bribery and money-laundering relating to an arms deal signed in the late 1990s. Ordinary South Africans are used to being ripped off by their rulers, after decades of dodgy dealings under the old apartheid regime and then decades of naked cronyism and rotten contracting under the African National Congress (ANC), the current ruling party, to which Mr Zuma belongs. But even the most jaded observers were shocked by some of the commission's findings.

At the centre of the allegations of sleaze are the Gupta brothers, three Indian-born businessmen who befriended Mr Zuma and went into business with his son, Duduzane. They all deny wrongdoing. In 2016 Thuli Madonsela, then the public protector (a constitutionally protected ombudsman), accused the Guptas of having—and profiting from—excessive influence over South African politics. Her report was entitled "State of Capture". With little faith that her successor would keep probing Mr Zuma, she cannily ordered the president to appoint the judicial commission that uncovered a "scarcely believable picture of rampant corruption" during his term.

The commission's report, the first of three due before the end of February, said that 1,438 people or companies were implicated in wrongdoing. These include close friends of the former president, among them senior figures in the ANC, as well as the party itself, which the commission said was financed with the proceeds of crime. The commission also said that several companies have questions to answer, including the South African branch of Bain & Co, an international consulting firm.

South Africa's president, Cyril Ramaphosa, may try to use the commission's report as a cudgel against the pro-corruption wing of his own party. But that wing is strong. A serious crackdown could split the ANC and possibly force him from power. Justice Zondo is prodding Mr Ramaphosa to crack down anyway. His first report recommends a slew of reforms to public procurement, senior appointments at state-owned firms and political-party finance, among other things. And he has said the commission will bequeath to the country 1m gigabytes of data containing evidence of corruption, fraud and state capture that could be made available to prosecutors by Mr Ramaphosa. By hanging this pistol so conspicuously on the wall, Justice Zondo no doubt hopes he has made it hard for Mr Ramaphosa to avoid firing it. ■

Israel's ultra-Orthodox Jews

Losing control

JERUSALEM

The alleged crimes of a popular author test Haredi leaders

Chaim Walder was an icon of ultra-Orthodox Jewry in Israel. His best-selling books stood out for their portrayal of young, devout characters who speak openly about their problems and emotions. Mr Walder's work could be found in nearly every ultra-Orthodox (or Haredi) home. By the time of his death on December 27th, the author was as prominent as any top rabbi.

Mr Walder (pictured) shot himself in a cemetery in central Israel, weeks after being accused of sexually assaulting women, girls and boys. He denied the charges in a suicide note. The affair is testing ultra-Orthodox rabbis, who had for decades endorsed his work.

Worthy of discussion

Mr Walder published 80 books, mainly for children. He was also a columnist for *Yated Ne'eman*, a rigid ultra-Orthodox newspaper. As such, he was entrusted with interpreting current events from the rabbis' perspective. The paper dropped Mr Walder after the allegations were reported elsewhere. No explanation was given. Haredi newspapers are forbidden from discussing sexual matters, including sexual violence. Photographs of even modestly dressed women are banned too.

But Mr Walder's suicide could not go without comment. *Yated Ne'eman* eulogised him as an illustrious "man of education and good deeds" who had been "suddenly taken away in his prime". The sexual-assault allegations were not mentioned. In their guidance to Haredi schools, rabbis directed teachers to focus on the "public shaming" Mr Walder had suffered, rather than on his alleged victims.

The rabbis thought they could control the narrative, at least among ultra-Orthodox Jews, who are not supposed to own televisions or radios, and who often have mobile phones that are blocked from getting onto the internet or using messaging apps. But many young Haredim ignore these strictures. They are active on social media, where Mr Walder's record was more openly discussed. "The rabbis cannot comprehend that all the details spread on social networks and outside Israel, way beyond their control," says Pnina Pfeuffer, the founder of New Haredim, a movement promoting more liberal attitudes than the traditionalists espouse.

It is hard to know how big a problem sexual abuse is among the world's 2m Haredim. As a voting bloc in Israel, they are powerful, so the government and the police are loth to intervene in their affairs. In both Israel and in America, where nearly a third of Haredim live, victims and their families are often urged not to report incidents to the secular authorities. In America, at least, more open-minded rabbis and community leaders have publicly addressed the Walder affair.

Israeli rabbis are unsure how to grapple with the issue—and their own loss of control. As young Haredim get their hands on more information, their elderly leaders seem increasingly out of touch. Haredim are still reeling from their decision to ignore covid-related lockdowns and keep schools and synagogues open, leading to higher death rates among the faithful. Some are now calling the Walder scandal the Haredi version of #MeToo. "It's a watershed moment for a community that was built on isolation," says Ms Pfeuffer. ■

Discontent in Saudi Arabia

Bubbling below the surface

MEDINA

Many Saudis are seething at Muhammad bin Salman's reforms. Can they do anything about them?

On December 30th the authorities in Saudi Arabia stuck notices to the shrines in Mecca and Medina, Islam's holiest cities, telling worshippers to stay two metres apart, lest they spread covid-19. But Muhammad bin Salman, the kingdom's de facto ruler (pictured), seems less keen on imposing restrictions elsewhere. His men have been drawing crowds to concert halls and fairgrounds in other cities. A government-endorsed rave last month brought together 700,000 young Saudis to dance for four days. "This kingdom is preventing virtue and promoting vice," says a teacher in Medina's quiet city centre.

Public-opinion polls are rare in Saudi Arabia. So it is tough to gauge the backlash against Prince Muhammad's efforts to open up and reform one of the world's most closed and intolerant countries. But soundings from inside the kingdom indicate that there are at least three unhappy groups: Salafists, who espouse a fundamentalist version of Islam; princes from the ruling House of Saud; and ordinary Saudis who liked things better the way they were. Only repression and fear prevent them from trying to unseat Prince Muhammad and turn back the clock.

Start with the Salafists, who fume that Prince Muhammad has broken an alliance between them and the House of Saud dating back three centuries. The prince has curtailed the powers of the religious police, who can no longer force shops and restaurants to close five times a day for prayer, or prevent men and women from greeting each other with kisses on the cheek. Officials in Riyadh, the capital, dictate Friday sermons. Preachers who are popular on social media have been banned from tweeting anything but praise for the prince's achievements.

Some Saudis still spread critical Salafist commentary by word of mouth. The clerics are said to have condemned the government-sponsored winter festival, featuring rides, games and music, in Riyadh. They accuse Prince Muhammad of playing God. The critics are "like ants. Their kingdom is underground," says a Saudi religious commentator in the western city of Jeddah. "The prince has closed their mouths, but he hasn't ended their kingdom."

Many royals are upset, too. They long had the power to petition the king, and had plenty of money to spend on the public and themselves. But Prince Muhammad has hobbled the aristocracy. He locked a number of prominent princes (and many businessmen) in a luxury hotel in 2017, shaking them down for cash and assets. Other princes complain of similar treatment, minus the hotel stay, as well as cuts to their perks (such as free flights, utilities and medical care). It has become harder for them to grab commissions on government contracts. In general, they say, Prince Muhammad has turned a more consensual system of politics into one-man rule.

Many Saudis have been happy to see corrupt princes taken down a peg. Others are thrilled with Prince Muhammad's expansion of personal freedoms. But some are uncomfortable with all the change. The sight of girls studying with boys in primary schools has made parents uneasy. Men often see women's empowerment as their own disempowerment. In the old days, "if I reported my daughter for leaving at night without my permission, they'd return her in handcuffs," says a former soldier. "Now if you try to stop her, she complains to the police and they detain you."

Some Saudis believe that Prince Muhammad, rather than replacing religious fanaticism with moderation, is jettisoning religion altogether. "Like Europe, he's throwing God out with the church," says a Sufi mystic in Medina.

The prince's economic policies are adding to the discontent. Businessmen complain that the prince is using the kingdom's vast sovereign-wealth fund and other royal entities to crowd out the private sector. Subsidies have gone down, while taxes, fees and fines have gone up. A cab driver notes that the state-controlled price of petrol, once cheaper than water, has quadrupled on Prince Muhammad's watch. (Economists and environmentalists applaud this.) There is little accountability. The prince and his fading father, King Salman, have ended the practice of hosting *majlises*, or weekly councils, where Saudis could appeal to their ruler.

Will anything come of all this unhappiness? Few believe the preachers will remain silent for ever. Some wonder if a Saudi version of Ayatollah Ruhollah Khomeini, who led the revolt against the shah's rule in Iran, might emerge. A former senior official invokes the memory of King Faisal, who was assassinated by his nephew in 1975. "Prince Muhammad knows what the family can do," he says. "They won't forgive him." Others hope that President Joe Biden will stand in the way of the prince's succession. Without Prince Muhammad in charge, some analysts think his reforms would be reversed. "Change is imposed from above and has sadly not established grassroots," says one.

But these scenarios seem unlikely. Prince Muhammad's repression appears to be working. Royals who question his actions are under house arrest (including two former crown princes). Thousands of preachers are behind bars, say dissidents, including Salman al-Odah, who boasted 14m followers on Twitter. Critics of the prince have been cowed. Even in London they turn off their phones before voicing their concerns. "Saudi Arabia has become a full-blown surveillance state," says Thomas Hegghammer, an expert on extremism. "With the technology available, I don't think a revolt or a coup is possible." ■

Europe

Russia and Ukraine

Keep calm and carry on

KYIV AND VOVCHANSK

Many ordinary Ukrainians shrug off the threat of an invasion

In the snow-blanketed town of Vovchansk in eastern Ukraine, where 20,000 people live just five minutes' drive from the border with Russia, Sergei Sergienko lists his tribulations. Jobs are scarce, so he must leave at 5.00am for construction work in Kharkiv, the nearest city, for which he earns 700 hryvnias ($25) a day. His father is in recovery after covid-19 put him in hospital. Absent from Mr Sergienko's list is the fear that Russian troops might sweep into Ukraine across the border down the road. "I try not to fill my head with worries about war, there are enough problems without it," he says. Besides, he adds with a shrug, it is not something he can control.

Ukraine is deeply wary of threats to its independence, so one might expect widespread alarm at the sight of 100,000 or so Russian troops at the border, and at the muttering of Vladimir Putin, Russia's president, about "military-technical" action. Things are not so simple. Ukrainians have weathered eight years of war against troops backed by Russia in the breakaway "republics" of Donetsk and Luhansk, which have claimed 13,000 lives. But they have also lived through rhetorical twists and turns, the making and breaking of ceasefires, and countless predictions of horrors that usually never came. In such a world, scepticism is a form of wisdom.

A slight majority of Ukrainians believes an invasion is likely, according to the Kyiv International Institute of Sociology, a polling outfit. Guessing the form it might take is a macabre game for some. Hackers could launch cyber-attacks on Ukrainian infrastructure. Troops could reach Kyiv and oust the government, or seize all land to the east of the Dnieper river, which bisects the country. Perhaps Mr Putin is after a strip of land connecting Russia to Crimea. Maybe he'd like to pry Russian-speaking cities like Odessa and Kharkiv away from Ukraine. Or perhaps it is all a ploy. If Mr Putin has settled on a plan, he is giving nothing away.

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The dynamic of efforts to avoid a war resembles that of a hostage negotiation. Russia points its guns at Ukraine, but directs the demands it unveiled on December 17th at America. These include a ban on Ukraine ever joining NATO, and on the alliance conducting any more drills on Ukrainian territory. Mr Putin seems poised to send troops to fight and die in Ukraine if talks break down. The West has no such inclination. And no last-ditch donation of Western weaponry will fix the mismatch between Ukraine's forces and Russia's.

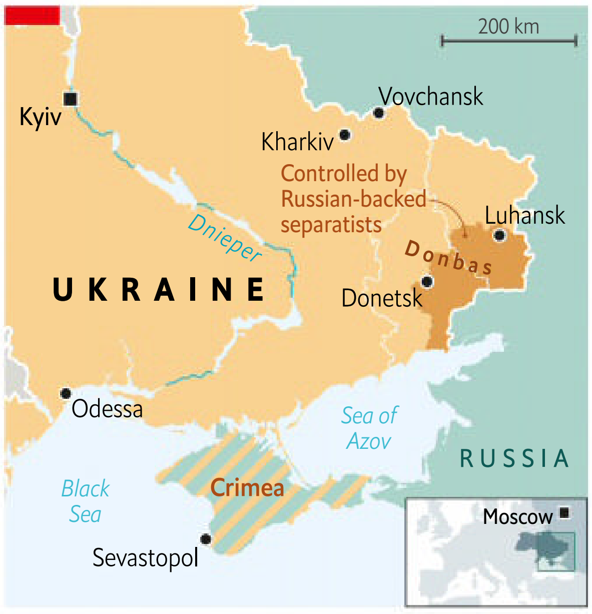
And yet even the Ukrainians expecting war are going about their lives. Take Serhii Kolisnyk, an IT professional in Kyiv. In his home is a ready-packed bag that he can head off with in an instant. It contains clothes for winter and summer, along with military gadgetry and what he calls "NATO bullets"—5.56mm cartridges from Lithuania, the alliance's standard ammunition. A bullet wound on Mr Kolisnyk's chest from 2015, when he was fighting in Donetsk, attests to his sincerity. But for now he is concentrating on his work. "Otherwise you will lose yourself in thoughts and not get much done," he says.

The puzzle of how to prepare for war without tormenting oneself is a collective one. In Kyiv, streets and markets bustle. Nightly news channels seldom lead with worries over war. But preparations are afoot, and not always smooth. In hipper areas of the capital, old air-raid shelters that became fancy bars and cafés must prepare to become shelters again. A three-minute test of Kyiv's sirens was expected on December 29th before authorities postponed it indefinitely the day before. A poorly presented plan ordering women in certain useful professions like IT to register with the armed forces sparked confusion, internet memes and a viral petition decrying it.

Volodymyr Zelensky, Ukraine's president, is not exactly uniting the country behind him. Polls suggest that few voters fancy him as a wartime leader. That may explain why his tussles with political foes have not ceased. The president predicted an oligarch-led coup against him in early December that failed to materialise. On December 20th his predecessor, Petro Poroshenko, was charged with treason over alleged payments for coal sourced from Ukraine's occupied territories. (He denies any wrongdoing.)

It is not only the spectre of war that haunts Ukraine, but also that of a new peace with new politics. Since its revolution of 2014 Ukraine has tried to reform its economy and armed forces, and buttress the rule of law. One motivation has been the lure of membership of NATO and the EU, which ask applicants to spruce up before joining. But a Russian invasion, or desperate compromises to avert one, could create a climate in which Ukrainians no longer believe the Western dream is possible. That might cause reform to stall.

Politicians in Ukraine would like to feel in charge of their country's fate. But their wish to throw their lot in with the West has prompted the Kremlin to dismiss them as puppets unworthy of direct communication. In an article published in October Dmitry Medvedev, a former Russian prime minister and president, offered a preview of the regime's negotiation strategy: "It makes no sense for us to deal with the vassals. Business must be done with the overlord." Russia and America have agreed to bilateral talks, scheduled for January 9th-10th. There will be no Ukrainians in the room.



That makes it hard for Mr Zelensky to adhere to his catchphrase: "nothing about Ukraine without Ukraine". His government claims to be untroubled by the talks, and the Western powers insist they are constantly consulting it. But Mr Zelensky might well be feeling the same impotence as Mr Sergienko in Vovchansk. ■

EU energy policy

Nein, danke!

BERLIN

Why Germans remain so jittery about nuclear power

THE END of 2021 brought mixed news for Germany's anti-nuclear crowd. On December 6th the gaggle of activists who had gathered outside the Brokdorf nuclear plant, in northern Germany, every month for the 36 years it had operated swapped their usual thermoses for champagne. For on December 31st Brokdorf, the construction of which had inspired some of the roughest protests in German history, was one of three nuclear plants switched off for good. The remaining three will be closed down by the end of this year, concluding a nuclear exit two decades in the making.

Then came the downer. Just before midnight on December 31st, after months of dithering, the European Commission circulated a draft energy "taxonomy" that labelled natural gas and nuclear fission as sustainable, with conditions. The taxonomy, which must be finalised and then approved by the EU's 27 governments and the European Parliament, is designed to steer investment to climate-friendly projects (see Finance section). But if the aim was to please everyone by finding room for all but the dirtiest fuels, it failed in Germany. Robert Habeck, the vice-chancellor and co-leader of the Green party, called the draft "greenwashing", citing concerns about safety and nuclear waste. An MP from the Social Democratic Party (SPD), which leads the governing coalition, compared nuclear supporters (ludicrously) to anti-vaxxers.

Atomic fission was once the future in Germany. That was before the emergence, in the mid-1970s, of the world's most enduring anti-nuclear movement. Unlike environmental groups in some other countries, says Jan-Henrik Meyer at the Max Planck Institute for Legal History and Legal Theory, Germany's Greens emerged directly from the anti-nuclear campaign. Its precepts guided their actions in state parliaments as well as the national one, culminating in a decision by an SPD-Green coalition in 2000 to abandon nuclear for good. In 2010 Angela Merkel partially reversed that decision. Less than a year later, amid huge protests in the wake of Japan's Fukushima meltdown, she made the biggest U-turn of her career and agreed to turn off all Germany's nuclear plants by 2022.

A disaster, say critics. Nuclear power entails hardly any carbon emissions and offers consistent baseload supply, unlike intermittent renewables. If new plants are pricey and create waste, prematurely decommissioning old ones seems self-defeating, especially when bureaucracy and bottlenecks are slowing the rollout of renewables. In the short term the burning of coal and gas may rise to make up the shortfall. And the transition to electric cars and the need for clean hydrogen will require yet more electricity, and thus an even more extensive rollout of renewable sources.

Many Germans deny that scrapping nuclear has made emissions higher than they would otherwise have been. Emissions from power generation have fallen, even as nuclear plants have closed. Moreover, they argue, renewables would not have grown so quickly had nuclear been preserved. "There was a clear connection between the exit from nuclear and the entry of renewables," says Simon Müller, Germany director at Agora Energiewende, a think-tank. The coalition that sought to halt nuclear power in 2000 also introduced vast subsidies for renewables as part of Germany's *Energiewende*, or energy turnaround. If the subsidies hurt German consumers, who have long faced Europe's dearest electricity, the rest of the world has benefited from the cheaper photovoltaic cells and wind turbines they made possible.

But Germany's *Sonderweg* (special path) in energy policy is not to the taste of countries with different histories, politics and energy mixes. France is placing a big bet on nuclear; several central European countries see it as a way to wean themselves off coal. Many resent the finger-wagging tone in Berlin, especially when Germany is boosting imports of Russian gas.

Germany is unlikely to try to overturn the commission's proposals, which would require a big majority of EU countries. But it will not be deflected from its anti-nuclear, pro-gas course: the commission has no direct say in countries' energy choices. As the EU works on laws to realise its ambition to go carbon-free by 2050, and fears of a winter energy crunch grow, these new-year spats herald bigger rows. ■

Italy's presidency

Decision time for Draghi

ROME

A turbulent few weeks in Italian politics begins

ITALIAN PRESIDENTIAL elections customarily have more twists and implausible turns than a Verdi opera. Voting in the latest—to replace President Sergio Mattarella—is to begin on January 24th. Over the coming weeks party leaders can be expected to trade bluff and counter-bluff, leaking the names of candidates whose chances they are in fact content to sacrifice while keeping secret until the last moment the identity of the one they really favour.

The outcome matters: Italian presidents have the power to dissolve parliaments and name prime ministers. They also hold office for an unusually long time: seven years, during which they acquire a moral authority that can constrain the actions of the government.

This time, the choice may seem obvious. The prime minister, Mario Draghi, a former president of the European Central Bank, is internationally respected. He is free of party allegiance and heads a cabinet spanning the political arc from hard right to radical left. It would seem logical for this broad coalition to unite in his support.

Yet he faces an uphill struggle. Ironically, the only major party to have consistently, if surreptitiously, backed Mr Draghi's elevation is the only one that has consistently criticised his performance. The hard-right Brothers of Italy (FdI), led by Giorgia Meloni, chose not to join Mr Draghi's coalition last year. Ms Meloni's party is notionally allied to the populist Northern League, headed by Matteo Salvini, and the centre-right Forza Italia party, led by the 85-year-old Silvio Berlusconi who, without actually declaring his availability, has indicated that he too wants the presidency.

Ms Meloni has had no choice but to offer Mr Berlusconi public support. But, unlike Mr Salvini's, hers has seemed distinctly lukewarm. Were Mr Draghi to get the job instead, it would end his government and perhaps prompt an early election. That would suit the FdI, riding high in the polls, and particularly Ms Meloni, who on present form would emerge as leader of the biggest party on the right, and prime minister should the right secure a majority as the polls currently suggest.

Enrico Letta, leader of the centre-left Democratic Party (PD), currently level-pegging the FdI in the polls, initially wanted Mr Draghi to remain prime minister until the next general election, due in 2023. But Mr Letta is said no longer to rule out backing his becoming president. The overriding priority for the PD is to ensure that the present coalition remains intact until the vote—not least to prevent the League, whose leader, Mr Salvini, has long been uneasy with the arrangement, from slipping away. The radical right could be an even more formidable force if it came into an electoral campaign after a year or more united in opposition.

Which is where Mr Berlusconi—or rather, his allies' support for him—becomes a problem. As Mr Draghi mused on December 22nd, it is unlikely that a coalition that had fallen out over the presidency could magically reunite to govern the country. But a joint candidate can only be agreed to in talks, and Mr Letta is refusing to negotiate with Mr Salvini until he rules out Mr Berlusconi. Italy's longest serving republican prime minister he may be, but Mr Berlusconi is also a convicted tax fraudster and the erstwhile host of the notorious "Bunga Bunga" parties. Opposition to him is even stronger in the anti-graft Five Star Movement than in the PD. On January 3rd the Movement's senators voted to try to square the circle by imploring Mr Mattarella to stay on until the next election. That is a solution the president has repeatedly dismissed. But it would offer a widely acceptable route out of a dangerous impasse. ■

The train in Spain

To the end of the earth

OURENSE

Spain's high-speed network reaches far-off Galicia

FOR CENTURIES the main way to Galicia, Spain's north-western corner, was on foot, on the pilgrims' trail to Santiago de Compostela. Poor roads meant that, until a decade or two ago, the drive from Madrid took nine hours. Recent improvements have cut the trip to the closest Galician city, Ourense, to about five.

Now the journey can be made in two hours and 15 minutes thanks to Galicia's first connection with Spain's enviable high-speed railway network. Next year the line should be extended to Santiago, the regional capital, and A Coruña, its biggest city. "Cinderella can now travel in a bigger and more comfortable car," said Ourense's mayor, Gonzalo Pérez Jácome, using his nickname for his city, which he says is treated like an unloved stepchild. No one wants to be left out of the system—Spain has the biggest high-speed rail network in the world after China's—but he doubts that the new extension will bring dramatic changes.

End of the line

Spaniards have long been leaving poorer rural areas for better opportunities in richer cities. Politicians in rural areas lament this. But it is not obvious that pricey infrastructure will do much to curb it. Mr Jácome notes that Zamora, until recently the high-speed trains' last stop en route to Galicia, has gained weekend tourists but continued to lose population since their arrival in 2015.

In any case, Galicia has been doing well. It was once a byword for isolation and poverty, "the end of the world", as the name of its westernmost point, Cape Finisterre, indicates. So many Galicians emigrated that *gallego* is still synonymous with "Spaniard" in parts of Latin America. But GDP per person, 66% of the national average in 1955, is now 92% of it. Ángel de la Fuente of FEDEA, an economic think-tank, points to fish processing, carmaking and clothing (Inditex, the parent company of Zara and other brands, is based there) and reasonably business-friendly politics, though he says a single cause of its catch-up is hard to identify.

Another fix for Spain's regional disparities has been proposed by the Socialist-led national government: opening new state bodies outside the capital. Many bigwigs in the conservative People's Party (PP) say this would be pointless. Galicia's leader, the PP's moderate Alberto Nuñez Feijóo, has a warmer reaction, noting that it makes little sense to put the country's Institute of Oceanography in landlocked Madrid. Once, people would have said the same about putting world-conquering companies and ultra-modern trains in Galicia.

Charlemagne | Rewiring Europe

The return of big government sparks questions for the European project

CRANK UP THE power flowing into a building and the lights shine that much brighter. Without an upgrade in its wiring, though, fuses will soon blow or smoke emerge from unexpected places. Political structures are much the same. A surge in power delights all involved—until some not altogether welcome things start happening.

Across the world the political current is swelling. The role of the state is expanding. The pandemic has eroded the already-shaky consensus about the limits of governments' role in liberal societies. National polities, those age-old edifices, have ample experience navigating such surges and sags. For the European project, a hotch-potch of creaking foundations and shaky extensions improvised over the years, more state power will require a rethink of the institutional cabling that keeps the lights on.

Big government ought to be familiar territory for Europe. Meddlesome public sectors are the norm at national level, crowned by EU institutions long derided by critics as a bonkers bureaucracy hell-bent on dictating the curvature of bananas. In fact the European project has more often been a force for governmental restraint. From its origins in the 1950s, the Brussels machinery has been less a Leviathan dictating new policies so much as a self-imposed straitjacket constricting national politicians. Why, the consensus went, should Europeans compete senselessly against each other when too often the culmination of such contests involved soldiers crossing borders and bombers flattening cities?

The project's most impressive achievements (and the emergence of its latest iteration, the EU, in 1993) came at a time when politicians the world over accepted that the public sector was bloated and overmighty. Few national leaders tried as hard as Margaret Thatcher to restrain it. But many outsourced the job to the Eurocracy. Brussels became an unexpected force in the checking of governmental power, a fountainhead of edicts to grudgingly obedient national politicians not to do things they might otherwise have got away with.

The single internal market, created 29 years ago, still requires the elimination of all obstacles to the free movement of goods, people, money and services—tying the hands of politicians who would like to stem migration from other EU countries, for example. Schengen forbids the erection of border barriers between its members. Trade deals negotiated by the EU remove tariffs in a continent where protectionism is sometimes popular. State-aid rules bar politicians from throwing public money at favoured industries, no matter how keen they are to promote national champions. Above all, the introduction of the euro in 1999 eliminated the possibility of devaluation and, in theory at least, put tight controls on budget deficits.

Now those who favour more government have the upper hand, from London to Washington and from Paris to Berlin. Can Europe, and more generally the fluid apportionment of powers between national and federal levels, adapt? Not easily. For the EU, banning stuff is straightforward: you only have to decide what to ban. Actually doing things is harder. First you must decide what to do, then figure out how to do it. Take public subsidies to industry. Forbidding them, as Europe has long done, merely involves chastising those that break the rules. But creating new handouts involves picking which companies should receive public largesse, and how much. Should it be microchip plants or defence firms? Who decides when priorities ought to change? Who pays?

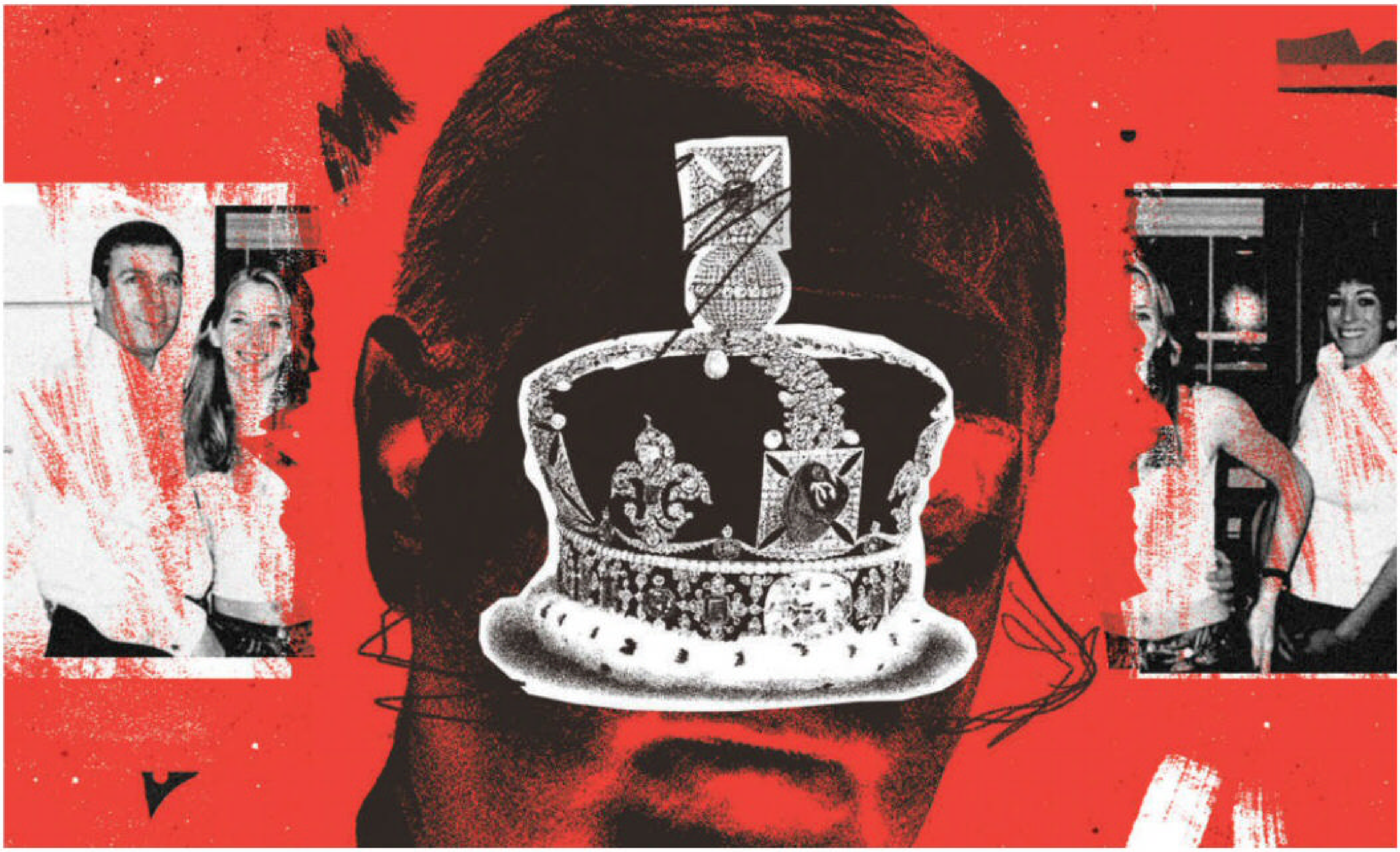
There are two ways that Europe can shift gears as government swells, argues Fabian Zuleeg of the European Policy Centre, a think-tank in Brussels. The first involves the EU getting out of the way. Countries can simply resume doing what they were once ordered not to do. For example, the rules around state aid and budget deficits were suspended as covid-19 raged, and are unlikely to snap back fully. That gives national governments more scope to indulge in once-forbidden behaviour. The drawback is that it throws the European project into reverse. The second path is for big government to happen at the European level. Some powers are shifting to EU institutions. In 2020 the European Commission, the bloc's executive arm, was given the job of sourcing vaccines for everyone from Finland to Portugal. Europe's ambitious green agenda is largely piloted from Brussels. The Next Generation EU (NGEU) fund, a €750bn ($846bn) pandemic response, is a step towards a federal budget. All that comes on top of already powerful bits of the edifice, notably the well-run European Central Bank.

EU turn if you want to

This "more Europe" approach raises questions about whether the EU's current institutional wiring is good enough. The Brussels machine is a fearsome regulator and legislator, but are its executive skills up to snuff? If the vaccine procurement episode is anything to go by, the answer is no. Early fumbles meant Europeans got their first jabs long after Americans and Britons did.

A lot more centralisation would also require more oversight. The commission is acquiring vast new powers. For example, it can withhold NGEU funds from countries that fail to enact the reforms they have promised in order to get their hands on a share of the cash. With such powers should come more accountability. Yet what happens in Brussels is seldom much scrutinised beyond its bubble. The European Parliament ought to do the job, but is often focused on dogmatically demanding a bigger role for the EU (and for itself).

Homeowners faced with vast electrical projects often settle for make-do solutions. Europe is likely to do something similar. Nobody is keen on a grand package of institutional reform, which only cumbersome treaty changes and consequent referendums could bring about. A new EU programme here, a fresh fuse-box there, will do the trick for now. But it may not prove a lasting fix. ■



Prince Andrew

A question of consent

Sexual-assault claims strike at the basis of Britain’s hereditary monarchy

PRINCE ANDREW does not deny that it is him in the photograph. But is it really his hand clasped around the waist of 17-year-old Virginia Roberts? He cannot be sure. In fact, he told the BBC in 2019, he had no memory of the picture being taken. It showed him in travelling clothes, he mused, but when in London he would wear a suit and tie, and he certainly didn’t go around hugging people. He had never been upstairs in the house of Ghislaine Maxwell, his socialite friend, where the snap was taken. And had it really been Jeffrey Epstein behind the camera? The prince hadn’t ever seen his friend take a picture.

That photograph haunts the queen’s second son. Mr Epstein would later be convicted of procuring a minor for prostitution, and in 2019, after being charged with further sex offences, he hanged himself with a prison bedsheet. On December 29th Ms Maxwell, visible in the picture behind Ms Roberts, was convicted by a jury in Manhattan of sex-trafficking offences. As for the prince, Ms Roberts (who now goes by her married name, Giuffre) is suing him for “exemplary and punitive” damages.

In a civil case in New York, she has alleged that she was forced to have sex with the prince against her will. She claims he abused her at Epstein’s homes in New York and the US Virgin Islands, while knowing she was a victim of sex-trafficking. He vehemently denies the allegations and says he has no recollection of meeting her. At a hearing on January 4th his lawyers sought to have the case struck out on the basis of a settlement Ms Giuffre signed with Epstein in 2009. As *The Economist* went to press, a decision was expected shortly.

Whatever happens, monarchists can try to argue that the crown is insulated from it. Although for his first 22 years Prince Andrew was second in line to the throne—just one nasty polo accident away from heir-apparent—his elder brother Charles’s children and grandchildren have pushed Andrew back to ninth in the line of succession. The monarchy is popular, too: a survey in 2021 by YouGov, a polling firm, found that voters prefer it to a republic by 61% to 24%. Prince Andrew’s difficulties have not dented the queen’s sky-high approval ratings. The royal family has weathered centuries of sexual misdeeds by dissolute princes. There is no republican caucus in Parliament. Europe’s defunct monarchies fell as a result of war and calamity: during peacetime they have survived through inertia.

Yet the allegations pose a threat to the monarchy, all the same. In June Britain is due to celebrate the 96-year-old Queen Elizabeth II’s platinum jubilee, marking 70 years since her accession. It may be the final grand spectacle of her reign. When it comes, the coronation of King Charles III will be a renewal of the public’s consent to the hereditary monarchy that forms the apex of the British constitution.

Once, that consent rested on principle. The inheritance of titles, land and property through primogeniture was regarded as a good in itself. That belief was bolstered by religious faith: a British monarch is sworn to defend the Protestant church. As late as ▸▸

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1956, a third of Britons thought the queen had been chosen by God.

But as her reign wore on, that principle faded. Britain's monarchy became what Vernon Bogdanor, a constitutional historian, calls "utilitarian", with legitimacy that rests on the good it does. It became necessary for royals to be hardworking and do-gooding. It embraced the rhetoric of meritocracy: never mind how the queen got her job, what mattered was that she performed it well. Intimacy succeeded reverence: nowadays, commoners love the royal family in part because they think they know it.

Ms Giuffre's allegations have thrown all this into doubt. Britain's main anti-monarchist movement, Republic, plans to step up its campaigning during the jubilee. It hopes the succession will open up debate on the constitution. The queen is the royal family's "heat shield", says its leader, Graham Smith. "When she is gone they're going to be very vulnerable."

A utilitarian monarchy is undermined by a prince who has been forced by scandal to abandon his duties, and now passes the time horse-riding in the grounds of Windsor Castle. A meritocratic monarchy is undermined by a prince unsuited to diplomacy, whose alibis have been widely ridiculed and who, even after Epstein's death, declared he had no regrets about their "very useful" friendship. His troubles are a reminder that heredity is a lottery, sometimes throwing up stars like Queen Elizabeth II, and sometimes duds. As for intimacy, the royal family's affairs and divorces in the 1990s bound the monarchy closer to ordinary people, with their own messy marriages. The allegations made about Prince Andrew are not exactly relatable.

The bare fact of Ms Giuffre's case leaves the royal family with no good options for dealing with Prince Andrew. There is talk of sending him into internal exile: of asking him not to use his titles and stripping him of his military ranks. That would still leave him in the line of succession. But the alternative—him renouncing his claim to the throne—would probably be even more damaging to the monarchy. It is fundamental to a hereditary order that succession is automatic and beyond debate. Start tinkering with the line because one son is better qualified, more popular or more moral, and the logic falls apart.

As Edward Bulwer-Lytton, a Whig politician in the 19th century, once put it: "What suicide is to a man, abdication is to a king." That is why Edward VIII's abdication in 1936 was so traumatic, and why Prince Harry, despite having "stepped back" from royal duties for a more glamorous life in Hollywood, remains sixth in line. The monarchy cannot tolerate Prince Andrew on the inside, but it cannot eject him either. The best it can do is close its eyes, and pretend he was never there. ■

Investment screening

Balancing act

Protecting national security without deterring investors

On January 4th a new investment-screening law came into effect, heralded by the government as "the biggest shake-up of the UK's national-security regime for 20 years". That is no exaggeration. It marks a shift away from economic openness towards suspicion and intervention. Kwasi Kwarteng, the business secretary, said it would show members of the public that "their security remains our number one priority". What could go wrong?

The government is seeking to stop assets vital to national security falling into hostile hands. A report in 2017 warned that "ownership or control of critical businesses or infrastructure could provide opportunities to undertake espionage, sabotage or exert inappropriate leverage". The context is concern about Chinese investment, and pressure to fall into line with allied countries such as America, Australia and Germany that have already tightened up.

Investors in 17 sectors, including artificial intelligence and communications, will have to notify the government if they are acquiring more than 25% of a company. The government will review, and may block, the transaction. It does not matter if the company is small or the investor British. If a deal should have been brought to the government's attention but was not, it may be voided. Companies trying to sell overseas assets used "in connection with activities" in Britain could also face review.

This new regime is very broad. It is backdated, covering deals that went through since November 2020. "National security" is undefined, and the government can intervene in deals outside the 17 named sectors, if it so chooses. Other countries generally limit such screening to fewer sectors, to acquisitions of domestic entities and to foreign investors. The broad scope of Britain's rules reflects how hard it is to protect against evolving, ill-defined threats. But it may also complicate enforcement, especially when it comes to overseas assets.

Cheques and the City

Another risk is of deterring welcome investments. Though the forms are quite straightforward, and the upfront costs relatively reasonable—as little as a few thousand pounds for small firms—the extra steps may cause delay. Extra information may be demanded before an application is processed, for example. Moreover, the government estimates that in complex cases a full national-security assessment could cost more than £120,000 ($160,000). Venture-capital and private-equity investors taking minority stakes in early-stage companies are especially likely to be put off, says Becket McGrath of Euclid Law, a legal firm, since they are unused to government departments nosing round deals.

Yet another worry is that uncertainty over the new system will clog it up. The government has tried to be clear in its definition of the 17 sectors where notifications are mandatory, but there will inevitably be borderline cases. Investors who fail to notify deals that should have been notified risk fines and prison time. They might therefore decide to err on the side of caution, slowing everything down. "I'm very concerned that from January 4th there's going to be a flood of notifications," says John Adebiyi of Skadden, Arps, Slate, Meagher & Flom, a law firm.

A final risk is that the government is too enthusiastic with its red pen. Unlike some European regimes, Britain's is not supposed to be used for industrial policy: national security is supposed to be the only criterion when deciding whether to allow a deal to go ahead. But there is sufficient discretion that political pressure to reject foreign takeovers may be hard to resist.

There is no doubt that the government is planning to become more meddlesome. Since 2002, when the previous regime came into effect, there were just 12 national-security interventions. An official impact assessment published in November 2020 estimated that the annual number of notifications under the new arrangements might be as high as 1,000-1,800, with around ten subjected to formal remedies. The government claims that the new rules should encourage investment by enhancing perceptions of Britain as a stable business environment. That reputation will have to be earned. ■

Bagehot | Kicking winners

Britain's politics involve a unique disdain for the country's strengths

MOST COUNTRIES take pride in their successful industries. Olaf Scholz, the new German chancellor, hosted a rally for Volkswagen's workers, ignoring a decade of corporate misdeeds by the carmaker. After his health minister suggested easing off the wine, Emmanuel Macron boasted that he drank it at lunch and dinner and shuddered at the idea of dry January.

In Britain politicians take a different tack, ignoring, disdaining or even actively despising the most successful sectors of the economy. Everything from banks to universities is denigrated. Two centuries ago David Ricardo came up with the notion of comparative advantage, that countries should focus on producing goods and services in areas where they are relatively efficient. Britain's politicians have turned this on its head: comparative disadvantage is in vogue.

Part of the problem is political geography. Take London. During the past three decades it has been transformed from a shrinking husk into a global powerhouse. Its productivity means that it pays £36bn ($49bn; 2% of GDP) more in taxes than it gets back in public spending. Both Boris Johnson, the prime minister, and Sir Keir Starmer, his Labour counterpart, represent London seats. But they keep quiet about it—except when exchanging barbs. "You can take the lawyer out of Islington but you can't take Islington out of the lawyer," Mr Johnson once said. In fact, Sir Keir does not live in Islington, but Mr Johnson did for many years.

Both parties are desperate to avoid being painted as metropolitan. Lisa Nandy, the Labour shadow minister for "levelling up", frequently laments high investment in cities, arguing that regeneration in Manchester has failed to boost Wigan, her constituency. But wealth flowed from London to Woking perfectly efficiently. The problem is not that places like Manchester became too much like London; it is that they are still not enough like London, with too little wealth to spread. But now that the frontline of British politics is in towns, such arguments go down poorly. Politicians do not follow growth, but votes.

If cities have fallen out of favour politically, the City has fallen furthest of all. Financial firms have few political friends. As mayor of London between 2008 and 2016, Mr Johnson was a booster of banks; as prime minister, his government is an enthusiastic basher. The finance sector was sacrificed during Brexit negotiations. Virtually none of its demands were met. Again, the negativity runs across party lines. Labour is twitchy about Tony Blair's economic model, namely being intensely relaxed about people getting filthy rich as long as they paid their taxes. The era of encouraging prosperity and sharing out the gains is over.

One reason Britain's strongest professions struggle to gain a sympathetic hearing is that they fall on the wrong side of the "Richard Scarry rule". Named for the much-loved author and illustrator, this warns politicians against picking fights with workers depicted in children's books. So fishermen will always find political allies; traders, lawyers and management consultants will struggle. The best-known reference to lawyers in the English canon comes in "Henry VI", where a character suggests that the quickest way to improve the country would be to kill them all.

Another is that, when it comes to economic matters, British politicians can be puritanical. They seem to think the country's thriving creative industries are not serious enough to merit praise. They talk about Premier League football as if it were a mere den of iniquity, rather than Britain's most potent cultural export. Video-gaming is dismissed as a hobby rather than acknowledged as a national strength. When Nadine Dorries became culture secretary in 2021, her main qualification was a willingness to put the boot into luvvies. In the same vein, politicians seem to see culture as easy and industry as hard. This gets things backwards. Any big European country could host a Nissan factory. But few could devise ITV's teatime quiz, "The Chase", which has been a global success.

Higher education is one of the few sectors where Britain can truly claim to be, in Westminster's peculiar vernacular, "world-beating". But the big rise in students going to university is cue for hand-wringing by (degree-holding) commentators, as if three more years of education over 80 years of life will lead to decadence. If the push to cut student numbers succeeds, it will be the University of Bolton that downsizes, not the University of Manchester. For a government set on levelling up—delinking opportunity from geography—this is a bad idea. In a place like Teesside, the new freeport may snatch headlines and be graced with visits by politicians in hi-vis jackets. The expanding university, which has helped stem the region's decline, is sometimes ignored.

Many of these factors are long-standing—and indeed, Britain's star industries may have flourished in part because of political neglect, rather than despite it. But Brexit ripped up its economic blueprint. Universities, financial and legal firms, and the creative industries were boosted by EU membership, and no party has identified a replacement. Many voters seem not to care. About two-thirds of pensioners supported the Conservatives, who promised a hard Brexit, at the election in 2019. So did nearly 60% of people who own their home outright. To someone with no rent or mortgage, and an inflation-linked pension, it may seem of little concern whether Britain's strongest industries wither.

Hard hats v mortarboards

Indeed, comparative disadvantage has its fans. Politicians are kicking winners because they think it will be popular. After all, bankers deserved opprobrium after the financial crisis. And man cannot live by quiz shows alone. If a voter's town struggles, it is easy to resent a thriving London. Many felt that the old system did not work for them, and so politicians stood on a platform of smashing it. Britain's economy was lopsided. But it is easier to fix weakness if you also play to your strengths. ■

The Economist

Tainted Waters

How chemical pollution is suffocating the sea

A new documentary film about the ocean's hidden killer: chemical pollution

To watch this film please scan the QR code
using the camera on your Apple iOS 11 or
Android 8.0 device and tap the link

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The business of religion

God, Mammon and real estate

BERLIN

After covid-19, many religious groups will have to sell assets or merge

ASK A VICAR, a rabbi or an imam about the biggest challenge facing his or her congregation, and the need to foster spiritual values in a secular world may leap off the tongue. Yet the world's religions face an equally acute but different sort of problem: how to stay in business in a material, competitive sense. In religion as elsewhere, covid-19 has helped sort out winners and losers. Churches that were catering effectively to the needs of their flocks even before the pandemic have often thrived as people worry more about death—and in lockdown have found more time to spare for worship and prayer.

But churches that were already struggling have found it ever harder to retain their congregations. The pandemic has speeded a shift to online services, giving many of the once faithful an excuse to stop showing up. Many religious institutions closed their doors overnight, moving their services onto Zoom. Now, as their buildings reopen, they are uncertain about how many worshippers will return. If, as seems likely, fewer come back, two trends that were already noticeable may intensify. Many religious organisations will get rid of their underused properties. And more churches will merge.

Economists have long analysed religious groups as if they were businesses. In 1776 a Scotsman, Adam Smith, argued in "The Wealth of Nations" that churches are enterprises, similar to butchers, bakers and brewers. In a free and competitive market, where they rely on donations and volunteers to make ends meet, clergy must act with "zeal" and "industry" to fill their pews. Mergers, acquisitions and bankruptcies are inevitable.

Nowadays the market for religion is in flux, perhaps more than ever. On the demand side, churches in the Western world are suffering from the global secularisation that began long before the pandemic. Even in America, the most patent example of a rich country that has thrived alongside religion (some say because of it), the share of citizens identifying as Christian has been dropping, from 82% in 2000 to less than 75% in 2020. According to the latest poll by the World Values Survey, a global network whose secretariat is in Austria, about 30% of Americans say they attend a religious service at least once a week. That is a lot compared with other rich countries. But the figure has fallen steadily from 45% at the turn of the millennium.

On the supply side, competition tends to be vigorous where governments do not dictate what religion people should follow. John Gordon Melton of Baylor University in Texas reckons there are around 1,200 Christian denominations in the United States along with an array of other faiths. To woo their congregations, they need to make worship attractive in all sorts of ways. Three-quarters of Americans, according to a Gallup poll, say music is a factor; 85% consider social activities a lure. As Roger Finke at Pennsylvania State University puts it, the key to pluralism is not that there are "more religions" but that they should "match" consumer tastes.

Covid has spurred innovation in churches across the world. The Milton Keynes Christian Centre in Britain, for example, has developed religious-education courses and prayer groups both online and in person. It backs a food bank and has opened what it calls a "sensory suite" ("a calming, soothing space") for children with learning difficulties. "Churches are having to revisit their ministry strategies to make sure they are engaging with where our culture is today," says Tony Morgan, founder of The Unstuck Group, a church consultancy based in Atlanta, which advises the parish in Milton Keynes.

Many churches, however, have failed to keep up. Their clergy did not move online during lockdown, either because they lacked the technology or disliked the idea. Some have been slow to reopen their doors. Meanwhile, the streaming of services has made it easier for worshippers to "church hop". In a poll of practising Christians in America in 2020 by Barna Group, which conducts worldwide research into religion, 14% had switched churches, 18% were attending more than one church, 35% were attending only their pre-pandemic church and 32% had stopped going to church altogether (see chart below).

An essential move for any church, whether it is struggling or thriving, is to balance its books, and that nowadays invariably means sorting out its property portfolio. Organised religion is grappling with the same problems faced by landlords of tired shopping malls and vacant offices as businesses go online. Do they stand by and watch attendance shrink? If not, how should they rethink their property?

Get real (estate)

For centuries religions have amassed earthly riches in the form of property. The Vatican owns thousands of buildings, some in the swankier parts of London and Paris. The Church of Scientology owns glamorous addresses in Hollywood said to be worth $400m, a medieval-style castle in South Africa and an 18th-century mansion in Sussex, England. The Wat Phra Dhammakaya, a temple owned by Thailand's wealthiest Buddhist sect, boasts meditation halls around the world. It is a mystery how much the Church of Jesus Christ of Latter-Day Saints, better known as the Mormon church, possesses; it is said to have American investments worth $100bn, including cattle ranches, a theme park in Hawaii and a mall near its Salt Lake Temple in Utah. Smaller religious institutions also depend on property for their earthly wealth. Temples, synagogues and mosques all watch warily as property prices rise.

This has become all the more vital as formal religious attendance falls, and donations fall with it. Church buildings in Britain have closed at a rate of more than 200 a year in the past decade. Hundreds more may be sold off or demolished in the next few years. Even in America, tens of thousands of buildings are at risk of shutting their doors for ever. Nearly a third of American synagogues have closed in the past two decades.

The Church of St Mary in Berlin, a vast red-brick Gothic structure, reflects this trend. It is full of frescoes and stone reliefs dating back centuries. The pews, however, are empty. The congregation has been dwindling since the second world war. Its Lutheran pastor, Gregor Hohberg, says that young Berliners still have "religious needs" but fulfil them at yoga classes and meditation groups. The public, he says, doesn't realise that the church welcomes gay families and that lots of pastors are women. Father Hohberg says that most Germans think the church is out of date.

Meanwhile, across the world, the soaring costs of utilities and urgent repairs are becoming prohibitive. The Church of England says it needs £1bn ($1.3bn)—more than seven times its annual income in 2020—for repairs in the next five years. English churches have closed at an alarming rate for the past 30 years. In America expenses related to buildings account for more than a quarter of church budgets. Yet churches across the country are reckoned to have 80% more space than they need.

Many mosques, especially in the West, are in financial difficulties, too. Though they often attract more worshippers than well-funded churches, their annual budgets, estimated at around $70,000 for the average mosque in America, are often too small to keep buildings in good repair.

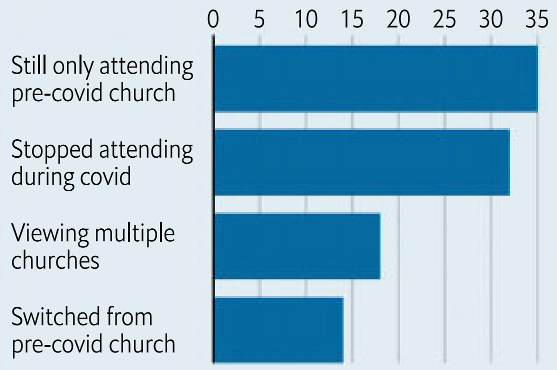
The internet has been both a blessing and a curse. A virtual sermon by the Archbishop of Canterbury in 2020 was heard by an estimated 5m people—more than five times the number of weekly churchgoers in Britain before the pandemic. Yet online participation comes at a price. If believers stop visiting them, ancient buildings risk becoming obsolete.

Hence religious groups are selling property faster than before, or are exploring other uses for it. Faith leaders seeking a place in Heaven are learning to adapt by selling or renting out real-estate assets on Earth, where moth and rust doth corrupt. Jehovah's Witnesses, who claim a worldwide membership of 9m, have sold their British headquarters, where they used to print leaflets and a magazine, the *Watchtower*. Hillsong, an Australian megachurch which claims 150,000 weekly worshippers in 30 countries, rents theatres, cinemas and other venues for Sunday services.

Surfing for Jesus

United States, covid-19 online church attendance

% responding*



*Among 562 practising Christians polled Apr-May 2020

Source: Barna, "State of the Church"

But parting with holy property can be awkward. In 2020 the overseers of the famous Hindu temple of Venkateswara in Tirumala in the Indian state of Andhra Pradesh were branded as "anti-Hindu" for trying to auction off dozens of "unviable" property assets that had been donated by members. They were made to drop the idea.

Get going or get gobbled up

Another, more radical, approach to such problems is becoming more common: if your church cannot thrive on its own, merge with another. A few months ago Jim Tomberlin, a pastor turned consultant, was sounded out by a church near Detroit, Michigan, that had been struggling with barely fifty people in its congregation and a mortgage of $450,000 on its property. Its leaders want to join up with another parish 15 minutes' drive away, whose church has a flock of a thousand—and a healthy balance-sheet. Like many others in a similar bind, the minnows have asked Mr Tomberlin to mediate. "They recognise we either merge or die," as he bluntly puts it.

The trend for churches to merge began before covid, but the pace may pick up. It is prompted not by theology but administration, as budgets tighten or pastors leave. Such consolidation is occurring between Roman Catholic churches, between synagogues and within other religions. But it is particularly common among America's mainstream Protestant churches.

As in any business, when two churches combine, their leaders can clash, cultural changes can put members off, and joint finances do not always work out. In church mergers, the weaker one is likely to lose followers. About a fifth lose more than 40% of their congregation within a year of the union, according to a survey in 2019 of almost a thousand church leaders who had been through a merger in the past decade.

But around 1,750 Protestant "megachurches" with more than 2,000 regular attendees and multimillion-dollar budgets have sprung up—some as a result of mergers. Some have lots of sites. Warren Bird, an American pastor who is an expert on megachurches, says a good coupling of parishes is like a successful marriage. Each partner must bring its own gift to the arrangement, whereas a struggling church that combines with one that is thriving may simply get swallowed up.

Economists are not alone in thinking religious competition healthy. "If there were only one religion in England," argued the French writer Voltaire in the 1730s, "there would be danger of despotism. If there were two they would cut each other's throats, but there are 30, and they live in peace and happiness." Perhaps he was unduly sanguine. But the virus has certainly made godly institutions take stock of their commercial as well as spiritual assets. ■

Apple's ambitions

The accidental mogul

Just how big in media does a $3trn tech firm want to be?

As violins play mournfully, Jon Stewart, an American comic, makes a mock-emotional appeal to viewers. "Every year thousands of hours of high-quality content go unwatched," he says seriously. "Because good, hard-working people… don't know how to find Apple TV+."

The world's most valuable company can afford a few jokes at its own expense. In the past year the tech colossus has raked in $366bn in revenue, a third more than in 2020. On January 3rd its market capitalisation briefly exceeded $3trn (see chart 1 on next page). The mere billions that it is investing in media, including a new television show hosted by Mr Stewart, represent pocket change to the Silicon Valley giant.

Yet some 300 miles (480km) down the coast in Hollywood, where executives used to snigger about the dilettantes from big-tech land up north, Apple's dabbling in media is no joke. Though it lags well behind Netflix and the like, Apple has enough money to ride out the increasingly expensive streaming wars, which threaten to bankrupt other players. One question keeps its rivals awake at night: What does Apple want out of show business?

Apple became a big noise in music when it launched iTunes 21 years ago this week. It took a cut of songs' sales, and shifted hundreds of millions of iPods for people to play them. Later iTunes sold movies, too, and the firm hoped to make the same model work in television, where the market is an order of magnitude larger than music. But paying for downloads was superseded by all-you-can-eat subscriptions, pioneered by Spotify in music and Netflix in TV. Unlike downloaded music or films, subscriptions could be easily moved between platforms. So Apple, seeing little opportunity to lock consumers into its devices, sat out the streaming revolution.

Today it is back in the media game, and a bigger force than Mr Stewart's joke implies (see chart 2). Apple Music, launched in 2015, is the second-largest streamer after Spotify. Apple TV+, now two years old, is the fourth-largest video service outside China by the number of subscribers, according to Omdia, a data company. In the past couple of years Apple has made smaller media bets including Arcade, a subscription gaming package, News+, a publishing bundle, and Fitness+, which offers video aerobics classes. There is talk of an audiobooks service later this year.

Like Amazon, another tech giant with a sideline in media, Apple has been able to roll out its offerings more quickly in more countries than most of its Hollywood rivals, which have had to build direct-to-consumer businesses from scratch. And it can afford to be generous with free trials: less than a third of Apple TV+ subscribers pay for the service, Omdia believes. It has had some hits, notably "Ted Lasso", which won a string of Emmy awards in September. But it lacks a back-catalogue, leading to high rates of customer churn. Smaller competitors like Paramount+ (part of ViacomCBS) and Peacock (from NBCUniversal) have limited new offerings but decades-old libraries.

Old-media firms have been puzzled by Apple's on-off sorties into their territory, ▸▸

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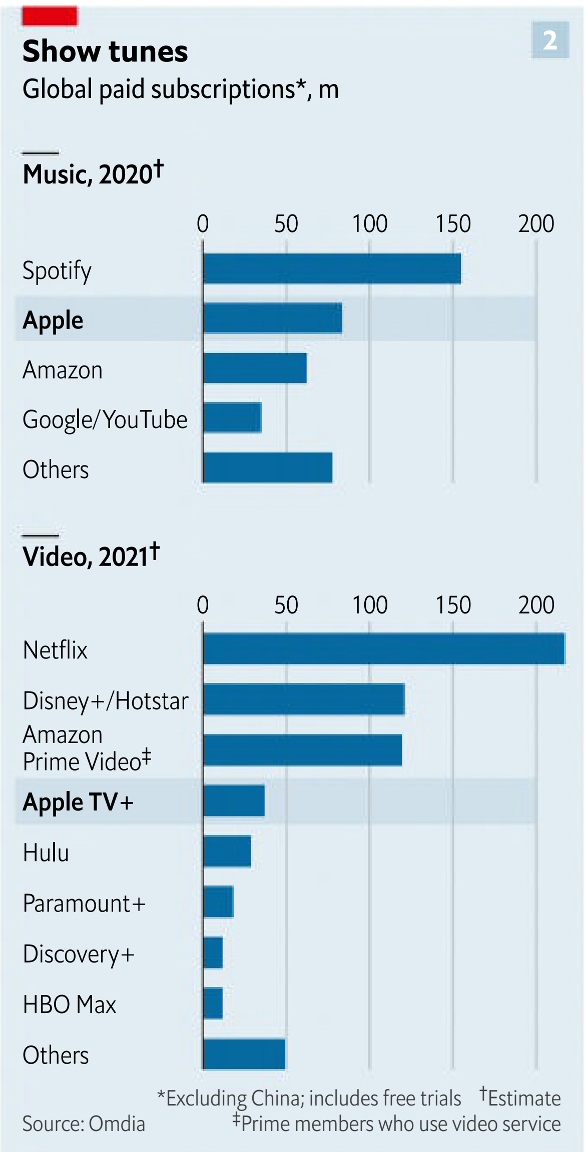
which sometimes seem half-hearted. Winning at streaming depends mainly on splurging on content. But deep-pocketed Apple spent just over $2bn on film and TV in 2021, against Amazon's $9bn and Netflix's $14bn, estimates Ampere Analysis, a research company. It doesn't bother to market its efforts much. And although medialand has cooed at the executives that Apple has poached, such as Jamie Erlicht and Zack Van Amburg from Sony and Richard Plepler from HBO, Silicon Valley insiders say that Apple keeps its own top tech people on other projects.

Indeed, while Hollywood frets about Apple's next move, many in Silicon Valley wonder why it is in media at all. None of the markets is a big prize for the world's most valuable firm. The entire global recorded music industry had sales of $22bn in 2020, less than Apple made just from selling iPads. In about a month Apple generates as much revenue as Netflix makes in a year. Apple's TV business depends on buying shows, rather than extracting rents from others' creations as it did in the iTunes days (and as it still does in its app store). And the "lock-in" effect on consumers is weak, since Apple's main media services are available on all platforms.

Apple's renewed interest in media is best explained by the transformation in the company's scale, which radically changes the calculation of which side-projects are worthwhile. Fifteen years ago, when Netflix started streaming, the billions involved in running a film studio would have represented close to a double-digit chunk of Apple's annual revenues. Back then, Silicon Valley executives would fly down to Los Angeles, thinking "We've got a big chequebook, we could go and buy a bunch of content," says Benedict Evans, a tech analyst and former venture capitalist. "And they would go and have their first meeting in LA. And the LA people would tell them the price"—at which point the tech people would go home. In 2021 Apple TV+'s estimated content budget represented 0.6% of company revenues: "play money", as Mr Evans puts it.

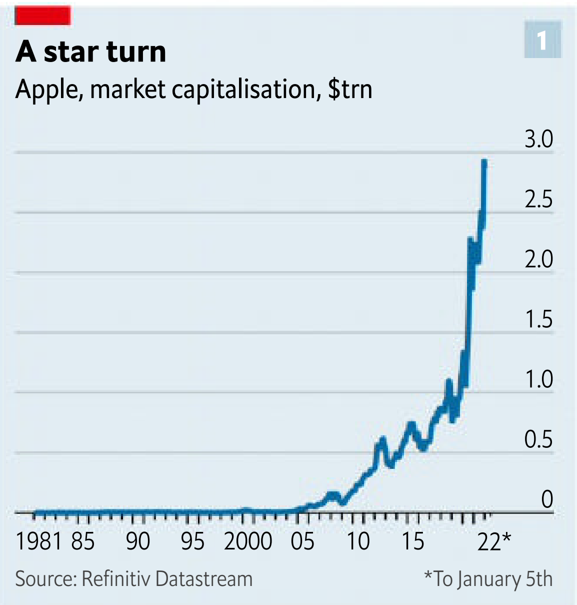


Show tunes

Global paid subscriptions*, m

Source: Omdia

*Excluding China; includes free trials †Estimate ‡Prime members who use video service



A star turn

Apple, market capitalisation, $trn

Source: Refinitiv Datastream

*To January 5th

The cost of running a studio can therefore be justified by what are only modest benefits to Apple. Streaming subscriptions may not lock people in as strongly as iTunes purchases did, but Apple's various services still sink "meat hooks" into customers, making them spend more time with their devices and making it a bit more inconvenient to leave Apple's ecosystem, says Nick Lightle, a former Spotify executive. The iPhone itself, which generated $192bn in sales in the past year, more than half of Apple's total revenues, is sold as a sort of subscription, points out Mr Evans. Anything that cuts churn among iPhone subscribers by even a small amount is likely to pay for itself.

Media also makes good marketing. Producing films with Steven Spielberg and Tom Hanks reinforces Apple's premium brand. Partnerships with pop stars keep it cool. And at a time when Silicon Valley is under attack for monopolistic practices, invasion of privacy, subversion of democracy and more, Apple is churning out worthy podcasts by Malala Yousafzai, a Nobel laureate, and teaching fitness routines to children. Not many companies can think of a film studio as a public-relations arm. A $3trn company can.

"Apple is not playing the same game as many of its other [media] competitors," says Julia Alexander of Parrot Analytics, another data firm. For one-trick rivals like Netflix, it is an uncomfortably asymmetric competition. Yet Apple's broader priorities can also hamstring its media ambitions. Apple TV+'s lack of a library could be solved by buying someone else's; the firm has been touted as a potential buyer of small studios like Lionsgate as well as giant ones like Disney. But Apple may be wary of provoking America's Federal Trade Commission (FTC), which has its sights on Silicon Valley. "If you're Apple and the FTC is looking at big tech, the last thing you want to do is make a huge acquisition," notes Ms Alexander. Lina Khan, the FTC's tech-bashing head, is examining Amazon's recent $8.5bn purchase of MGM Studios; never mind that the target is a relative tiddler in a fragmented market. As firms vie for control of tech's next commanding heights, from decentralised Web3 to virtual reality, drawing regulators' attention by buying old TV episodes could be a strategic error.

For as long as they continue to help sell its devices and burnish its brand, Apple will keep dripping investment into its media services. Doing so will get more expensive: global spending on video content will exceed $230bn in 2022, according to Ampere, nearly double what it was a decade ago. As smaller competitors are outspent and give up, Apple's position could even strengthen. But given its bigger ambitions in other industries, in media Apple is likely to be satisfied to stick to its role as a supporting actor. ■

Entertainment

No child's play

NEW YORK

Streaming giants get more serious about children's shows

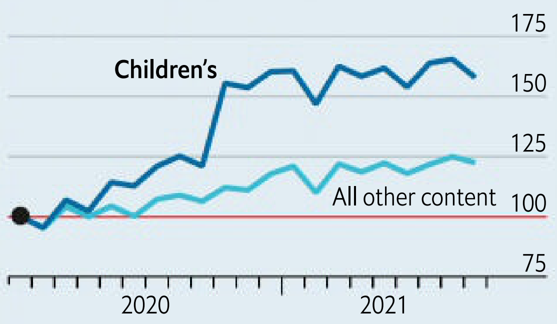
THE PANDEMIC has been tough for parents of young children. With schools shut, many had to keep an eye on their offspring while juggling chores and remote work. Succour came courtesy of Hollywood. A study by Parrot Analytics, a data firm, found that demand for children's shows in America—measured by video views, social-media mentions, searches on IMDB, a platform for film buffs, and the like—grew by nearly 60% from the start of 2020, before covid-19 hit, to last September (see chart on next page). Demand for other genres rose by 23% in that period.

At the same time, parental concerns about their progeny's media diets have grown. A recent Pew survey found nearly half of parents saying that YouTube, the most popular destination for young audiences, exposed their children to inappropriate content. Many are chary of social-

More TV for Mike Teavee

United States, demand* for subscription-video-on-demand content

By genre, January 31st 2020=100



*Weighted average of factors such as video streams, social-media mentions, Wikipedia or IMDb searches

Source: Parrot Analytics

media apps such as TikTok, one-third of whose users may be under the age of 14, according to internal data seen by the *New York Times*.

Fortunately, help is at hand. Disney, arguably the child-friendliest brand of all, has created a new role tasked with seeking out external children's programming—part of a reorganisation to separate content creation from merchandising. Paramount+ is promoting its Nickelodeon trove to parents. Its own parent, ViacomCBS, is reportedly in talks to buy the "Alvin and the Chipmunks" franchise from its creators for as much as $300m.

In September Netflix paid more than $700m for the Roald Dahl Story Company, which owns the rights to the eponymous author's beloved tales such as "Charlie and the Chocolate Factory". In November it announced the launch of Kids Clips, which offers curated short videos from its expanding slate of children's programmes. Last autumn HBO Max, best-known for edgy grown-up fare, launched Cartoonito, a portal dedicated to pre-school shows.

Upstarts are getting in on the action, too. Kidoodle.TV, an ad-supported app that specialises in children's shows, has seen its downloads balloon during the pandemic. In November two former Disney executives agreed to pay $3bn for Moonbug Entertainment, the company behind hit programmes like "Cocomelon" and "Blippi".

Youth programming is attractive to streaming services for several reasons. Children's television shows, especially animated ones, often cost less to produce than entertainment for adults, observes Erin Meyers of Oakland University. They tend to have a longer shelf life, too, since young children are less fussy than older viewers about what is hip at any given moment. And children's programming offers vast merchandising opportunities in the form of toys. Most important, if you get it right you may be rewarded twice over: with current custom from grateful parents and, if their offspring like what they see, a guaranteed stream of future viewers. ■

The Theranos trial

Blood will have blood

NEW YORK

A jury finds a former Silicon Valley star guilty of fraud

ON JANUARY 3RD, after seven days of deliberation, a 12-member jury in Silicon Valley found Elizabeth Holmes, the entrepreneur behind a blood-testing startup, guilty of four counts of fraudulently deceiving investors. Each count carries a prison term of up to 20 years; no date has been set for her sentencing. She was acquitted of four charges of deceiving patients and doctors; on three others the jury were deadlocked. The verdict, against which Ms Holmes's lawyers are expected to appeal, marks the collapse of a career that beguiled the media, politicians and investors.

After dropping out of Stanford University in 2003 at the age of 19, Ms Holmes founded Theranos to develop a radical advance in blood-testing technology that she hoped would allow hundreds of tests to be performed using a single tiny drop of blood rather than a full vial. The tantalising vision promised to make health care more effective and efficient.

Unfortunately, Ms Holmes could not bring it to fruition. In voting to convict on four counts, the jury concluded that, aware of her company's failures, Ms Holmes intentionally lied about its prospects and capabilities, and so crossed the fine line from promotion to deliberate fraud—a step she explicitly denied in her own testimony.

In many ways Theranos differed little from many hot startups. It raised more than $1bn, reached an extravagant theoretical valuation (in its case $9bn) before crashing without ever going public and disintegrating into a vast graveyard of unfeasible ideas. Typically, executives behind such ventures are quickly forgotten. But Ms Holmes's path differed at least in part because even though her company's products failed, her presence and broader story proved unusually compelling.

Unmasked

In building Theranos, Ms Holmes assembled a remarkable collection of acolytes. Her board was filled with several former secretaries of state and defence. Joe Biden, while vice-president, called Theranos "the laboratory of the future" and Ms Holmes "an inspiration". The company's shocking failure suggested her famous followers had fed merely on hype. The fashion press was besotted by Ms Holmes's ability to present herself. The Steve Jobs-inspired black turtlenecks she wore at work were seen as reflecting authority. The open-necked shirts and blouses she donned during the trial were a sign of appealing vulnerability, augmented by the nappy bag she carried to court, which signalled to the jury the costs of a potential prison term to a young mother and her infant child (who was born in July). Reporters and other onlookers waited for hours to nab a seat in the packed courtroom.

Ms Holmes's defence followed two distinct lines. The most obvious hinged on naivety. She may have been wrong about Theranos's prospects, the argument went, but that is not a crime. Startup investors are supposed to be a sophisticated lot, willing to wager based on deep insights in the hope of a big return, while understanding that long shots can fail. The prosecutors' counterargument rested primarily on the presentations which Ms Holmes made to investors. These appeared to exaggerate potential sales and trumpet non-existent endorsements from the armed forces and big pharmaceutical companies. The single substantive request made by the jurors during their deliberation was to rehear a presentation that had been recorded, suggesting they were parsing what precisely she had been telling her backers.

Ms Holmes's second line of argument, the so-called Svengali defence, was particularly appealing to Hollywood, but its impact on the jury was unclear. She claimed at the trial to have been sexually and emotionally abused and manipulated by Ramesh "Sunny" Balwani, her ex-partner and Theranos's former chief operating officer. As such, her lawyers posited, she could not be held responsible for her actions.

Mr Balwani has strongly denied all allegations. His own trial for fraud charges will begin next month, ensuring the Theranos saga will not end soon. And even after the last gavel is pounded, there will be more to come. In the lead-up to the verdict Hulu, a cable network, released photos from an upcoming mini-series on Ms Holmes's story, starring Amanda Seyfried. Ms Holmes may end up going to prison, but she will not be going away. ■

Mobile telecoms

Cloud v ether

SAN FRANCISCO

As wireless networks become virtual, two huge industries collide

SMARTPHONES ABLE to take advantage of zippy fifth-generation (5G) mobile telephony have graced American pockets since 2019. Samsung launched its first 5G-enabled device in April that year. Apple followed suit in late 2020 with its long-awaited 5G iPhone. Until now, however, actual 5G coverage in America has been limited. Only one of the country's three biggest carriers, T-mobile, has offered broad 5G connectivity. AT&T and Verizon, its two bigger rivals, had to delay their large-scale rollouts in December after the Federal Aviation Administration aired concerns that their 5G radio spectrum interferes with avionics on some ageing aircraft. On January 3rd both firms, which insist that the technology is safe (and can be turned off around airports, just in case), said they would again postpone switching on their 5G networks by two weeks.

Yet it is the imminent arrival of another player in the 5G contest that is the talk of the industry. In the next few months Dish Networks, a company best known for its satellite-television service, is expected to launch America's fourth big carrier. The firm's promise to inject more competition into a concentrated and ossified sector was what helped persuade regulators to approve a merger between T-mobile and Sprint, a smaller incumbent, in 2020.

More important, Dish's network is to be the first in America that would live almost entirely in a computing cloud. Except for antennas and cables, it is mostly a cluster of code that runs on Amazon Web Services (AWS), the e-commerce giant's cloud-computing arm. As such, the roll-out is a test of the extent to which computing clouds will "eat" the telecoms industry, as software has eaten everything from taxis to Tinseltown. If the launch is a success and other carriers follow suit, it could reconfigure not just America's wireless industry but the global mobile-telecoms market with annual revenues of around $1trn, according to Dell'Oro Group, a research firm. And it would entangle telecoms intimately with the cloud business, whose revenues could be half as large this year and are growing at double digits.

Dish best served cold

Dish's network is the culmination of a process that started in the early 1980s. Back then antitrust regulators allowed AT&T, the world's largest network operator, and IBM, its biggest computer firm, to enter each others' markets. AT&T started selling personal computers and IBM bought ROLM, which sold telecoms equipment. Pundits predicted an epic battle between the two giants—and a rapid convergence of the telecoms and computer industries into one.

Neither the battle nor the convergence materialised. Forty years ago the two markets proved too distinct and the technology was not up to snuff. Now things look different. Computing clouds such as AWS and Microsoft's Azure are maturing fast, and finally becoming able to deal with the demanding task of powering a mobile network. The latest iteration of mobile technology, 5G, was conceived from the start not as a collection of switches and other hardware, but as a set of services that can be turned into software, or "virtualised". And the telecoms industry is becoming less proprietary, embracing "open radio access network" (O-RAN) standards that make it possible to virtualise ever more functions previously performed by hardware. As a result, networks can turn into platforms for software add-ons, just as mobiles turned into smartphones which could run apps.

All this will be on full display in Dish's network. Instead of bulky base stations used in conventional mobile networks, its technology is housed in slender boxes attached to antenna posts. These are connected directly to the AWS cloud, which hosts the virtual part of the network, including all of Dish's other software (for example that used to manage subscribers and billing). The only thing Dish is buying from established makers of telecoms gear is software, says Marc Rouanne, its chief network officer (who used to work for one such vendor, Finland's Nokia).

As a result, Dish's network will be cheaper to set up and to run. It will also be fully automated, down to the virtual "labs" where new services are tested. This should allow the company quickly to spin up special-purpose networks, for instance connecting equipment in mine shafts, or enabling drones to talk to each other and their controllers. Dish also wants to use artificial intelligence to optimise the use of radio spectrum, including by training algorithms which are able to adapt parts of the network to specific conditions such as a storm or a mass concert.

Although Dish is pushing this "cloudification" furthest, other carriers around the world are not far behind. In June AT&T, still America's largest mobile operator, sold the technology that powers the core of its 5G network to Microsoft, which will run it for AT&T on its Azure cloud. Reliance Jio, India's technology titan, has ambitious plans to build a cloud-based 5G network.

These developments are also bringing the big cloud providers into the telecoms world. Last year Microsoft bought Affirmed Networks and Metaswitch, the main software suppliers for the core of AT&T's 5G network. They now form a new business unit called "Azure for Operators". Google has a similar effort and recently forged a partnership with Telenor, a Norwegian telecoms company. In November AWS announced a new offering that lets customers quickly set up private 5G networks on their premises.

Newcomers are also elbowing their way into the business. Rakuten, a Japanese online giant, has already built a Dish-like network at home. Rather than outsourcing its cloud operation to big tech, Rakuten has built its own, and launched a subsidiary, called Rakuten Symphony, to offer the sys- ▸▸

tem to other operators. It is helping 1&1, a German web-hosting company, to build a network. “We don’t want to be a telco cloud, but enable operators to make their own,” explains Tareq Amin, who heads Rakuten Symphony.

Existing mobile networks will not be replaced overnight. Rakuten’s faced delays and Dish’s was originally scheduled for launch late last year. Some technical barriers remain. Despite being seen as a welcome alternative to gear from Huawei, a controversial Chinese giant, especially in Europe, gear based on O-RAN specifications is not mature. Its European adopters have therefore yet to install it in the most vital parts of their networks. “It’s in an extended beta test,” sums up Dean Bubley of Disruptive Analysis, a consultancy.

Another question is whether the cloud can completely gobble up telecoms networks, notes Stéphane Téral of LightCounting, another consultancy. Controlling a 5G base station is hugely complex and involves keeping tabs on hundreds of parameters. The more flexible a carrier wants to be, the more complicated things get. At least for some time, the necessary control software may need to run on specialised gear near the antenna rather than on generalist servers in faraway data centres.

Then there are the political and financial barriers. European governments fret that America’s spooks will have even more access to their country’s networks if these run in American clouds (Europe has none of its own and is understandably even warier of Chinese ones). Carriers, in Europe and elsewhere, fear losing business to the tech giants like Amazon, Google or Microsoft, which have already skimmed most of the value generated by 4G mobile technology. “If all this is not financially interesting for [telecoms firms], they will try something else,” says Michael Trabbia, chief technology officer of Orange, a French mobile operator.

However this plays out, the telecoms business will look very different a few years from now. The contest for control of the telecoms cloud, and particularly its “edge” (tech speak for what remains of the base station) will only heat up. Whoever is in charge of these digital gates will have the fastest access to consumers and their data, the main currency in a world of new wireless services, from self-driving cars to virtual-reality metaverses.

The cloud businesses have the technological edge for now, and will try to eat as much of wireless networks as possible. The operators have relationships with customers, know how to manage networks and own the radio spectrum. Eventually, cloud providers and network operators will probably come to some kind of agreement. In the new world of mobile telecoms, neither can do without the other. ■

Carmaking

Motor Sin City

The digital future of vehicle technology

Since 2008, when General Motors’ then boss delivered a keynote speech at the Consumer Electronics Show (CES), an annual technology jamboree, Las Vegas has offered a glimpse of carmaking’s digital future. This year nearly 200 automotive firms signed up for the event, which got cracking on January 5th. That day GM’s current chief, Mary Barra (pictured), addressed a mostly online, Omicron-avoiding crowd. Like other big carmakers, GM did not show up in person. But Ms Barra’s virtual CES outing signalled how rapidly cars are evolving from oil-filled lumps of metal into devices stuffed with silicon.

Ms Barra talked about GM’s transformation from “automaker to platform innovator”, extolled its advances in commercial electric vehicles (EVS) and autonomous driving, and unveiled a battery-powered version of the Chevrolet Silverado pickup. Rival firms raced to appear even more innovative. BMW demonstrated a system that changes a car’s paint colour at the press of a button. Mercedes-Benz went so far as to claim that its Vision EQXX concept, with interior materials fashioned from bamboo, cactus and mushroom, and a battery-powered range of 1,000km, was “reinventing the car”. Not to be outdone, consumer-electronics giants strutted their automotive stuff. Sony, a Japanese one, surprised many attendees when it announced a possible foray into carmaking (though it may merely use the experience to develop EV and self-driving tech to sell to others).

Other announcements were less flashy but more telling when it comes to the digitisation of carmaking. Mobileye, the self-driving arm of Intel, which supplies chips to many big car firms, announced expanded deals with Ford, Geely and Volkswagen. Qualcomm, another chipmaker, inked new ones with Volvo, Honda and Renault.

The courtship between carmakers and chip firms will only intensify. The worldwide chip shortage that knocked nearly 8m units off global car output is thankfully easing and annualised global car production could return to pre-pandemic levels by the second half of 2022, according to Evercore ISI, an investment bank. Still, car bosses are desperate to avoid a repeat. Many look enviously at Tesla, whose own intimate rapport with semiconductor suppliers buoyed its full-year output for 2021 to a total of 930,000 vehicles. ■

SILVERADO
SILVERADO

Pickup lines

Labour shortages

Blue-collar burnout

NEW YORK

Why so many workers are fleeing the hospitality sector

Restaurant and hotel bosses have had a tough year. Some 700,000 hospitality workers threw in the towel on average each month in the past year. Bars, cafés and eateries are 1.3m workers short relative to the 16.9m employed before covid-19. On January 4th the Bureau of Labour Statistics reported that a record 4.5m Americans quit their jobs in November, 9% up on a month earlier. The quit rate in leisure and hospitality jumped by a percentage point, to 6.4%. Uncertainty from the Omicron variant may make matters worse: as cases surged in December, restaurant footfall fell sharply, according to OpenTable, an online booking website.

As in other industries, workers in hospitality are leaving for various reasons, from fear of infection to better opportunities elsewhere. But one big motive is burnout. Psychological exhaustion is more often associated with hard-charging investment bankers and other professionals. Amid the pandemic it has afflicted many blue-collar workers, too.

Surveys find that chronic stress is a growing concern across the labour market, but dissatisfaction is especially high in service roles, where hybrid work is not possible. Data collected by Glassdoor, an employment portal, found that employees rate the hospitality sector as one of the worst for work-life balance. Mentions of “burnout” in reviews of employers on the site have doubled during the pandemic. Workers report that new tasks such as dealing with angry customers and enforcing health mandates have added to the burden.

Work in restaurants and hotels can be physically taxing, poorly paid and unpredictable. Unlike white-collar workers, who suffer from needing to be constantly available, service workers burn out as a result of uncertain schedules and a lack of control over time, says Ashley Whillans of Harvard Business School. Ian Cook of Visier, a human-resources-analytics firm, says that time off during lockdowns gave employees an opportunity to reflect on their relationship with "fragile and meagrely paid work".

Firms have scrambled to respond. Many food and accommodation businesses have raised wages—by an average of 8.1% year on year in the third quarter, the highest increase on record. That may not be enough. In one poll of hospitality workers, over half said higher pay will not lure them back by itself. Large retailers such as Amazon and Target, which require many of the similar skills, are poaching hospitality staff by offering non-cash perks like subsidised college education, parental leave and career advancement. Most restaurants cannot afford to match such offers.

Daniel Zhao, an economist at Glassdoor, foresees a permanent reduction to the hospitality workforce. "High turnover tends to be contagious," he says, and early resignations can start a vicious cycle. As some workers quit, those who remain must pick up the slack, leading to more stress. This in turn provokes more exits, and so on. Add an ageing population, with dwindling numbers of young people prepared to toil in kitchens or sweep hotel corridors, and hospitality businesses may be contending with blue-collar burnout for years to come. ■

Bartleby Office theatrics

It's not what you do. It's how ostentatiously you do it

In an episode of "Seinfeld", a vintage TV sitcom, the character of George Costanza reveals the secret of pretending to work: act irritated. He shakes his head, frowns and sighs to demonstrate the technique. "When you look annoyed all the time, people think that you're busy." In comments posted below this clip on YouTube, visitors report with delight that the tactic really does work and offer a few tips of their own: walk around the office carrying manila envelopes, advises one.

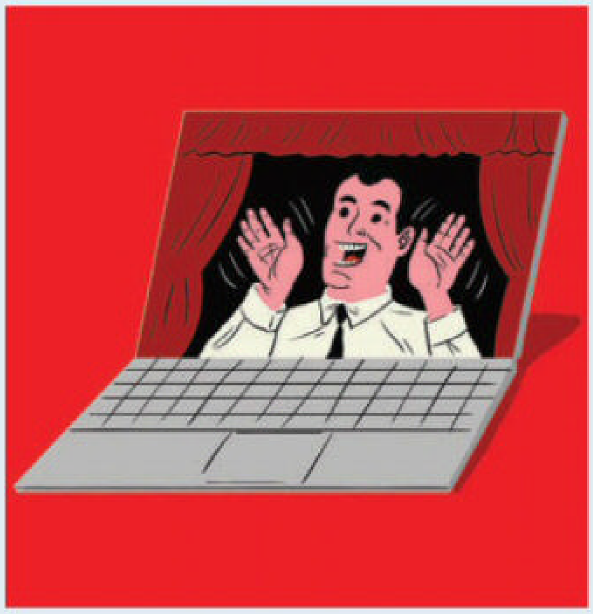
Before the pandemic turned everyone into remote employees, managers worried that working from home would be a paradise for slackers like George. People would be out of sight and out of mind: starting late, clocking off early and doing nothing in between. The reality of remote working has turned out to be different. Days have become longer and employees are demonstratively visible. Work has become more performative.

The simple act of logging on is now public. Green dots by your name on messaging channels are the virtual equivalents of jackets left on chairs and monitors turned on. Calendars are now frequently shared: empty ones look lazy; full ones appear virtuous.

Communication is more likely to happen on open messaging channels, where everyone can see who is contributing and who is not. Emails can be performative, too—scheduled for the early morning or the weekend, or the early morning on the weekend, to convey Stakhanovite effort. Repeated noises like Slack's knock-brush provide a soundtrack of busyness.

Meetings, the office's answer to the theatre, have proliferated. They are harder to avoid now that invitations must be responded to and diaries are public. Even if you don't say anything, cameras make meetings into a miming performance: an attentive expression and occasional nodding now count as a form of work. The chat function is a new way to project yourself. Satya Nadella, the boss of Microsoft, says that comments in chat help him to meet colleagues he would not otherwise hear from. Maybe so, but that is an irresistible incentive to pose questions that do not need answering and offer observations that are not worth making.

Shared documents and messaging channels are also playgrounds of performativity. Colleagues can leave public comments in documents, and in the process notify their authors that something approximating work has been done. They can start new channels and invite anyone in; when no one uses them, they can archive them again and appear efficient. By assigning tasks to people or tagging them in a conversation, they can cast long shadows of faux-industriousness. It is telling that one recent research study found that members of high-performing teams are more likely to speak to each other on the phone, the very opposite of public communication.

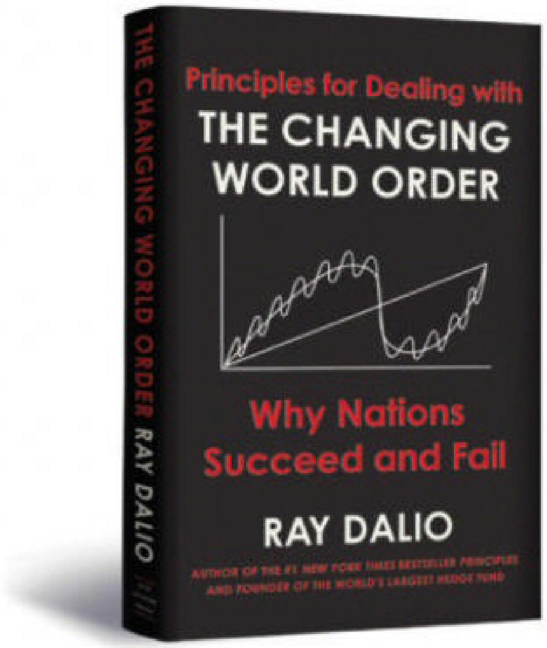


Performative celebration is another hallmark of the pandemic. Once one person has reacted to a message with a clapping emoji, others are likely to join in until a virtual ovation is under way. At least emojis are fun. The arrival of a round-robin email announcing a promotion is as welcome as a rifle shot in an avalanche zone. Someone responds with congratulations, and then another recipient adds their own well wishes. As more people pile in, pressure builds on the non-responders to reply as well. Within minutes colleagues are telling someone they have never met in person how richly they deserve their new job.

Theatre has always been an important part of the workplace. Open communication is a prerequisite of successful remote working. But the prevalence of performative work is bad news—not just for the George Costanzas of the world, who can no longer truly tune out, but also for employees who have to catch up on actual tasks once the show is over. By extension it is also bad for productivity. Why, then, does it persist?

One answer lies in the natural desire of employees to demonstrate how hard they are working, like bowerbirds with a keyboard. Another lies in managers' need to see what everyone is up to. And a third is hinted at in recent research, from academics at two French business schools, which found that white-collar professionals are drawn to a level of "optimal busyness", which neither overwhelms them nor leaves them with much time to think. Rushing from meeting to meeting, triaging emails and hitting a succession of small deadlines can deliver a buzz, even if nothing much is actually being achieved. The performance is what counts.

TO UNDERSTAND WHAT'S HAPPENING NOW...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Residential property

House party

HALIFAX, CANADA

How long can the global housing boom last?

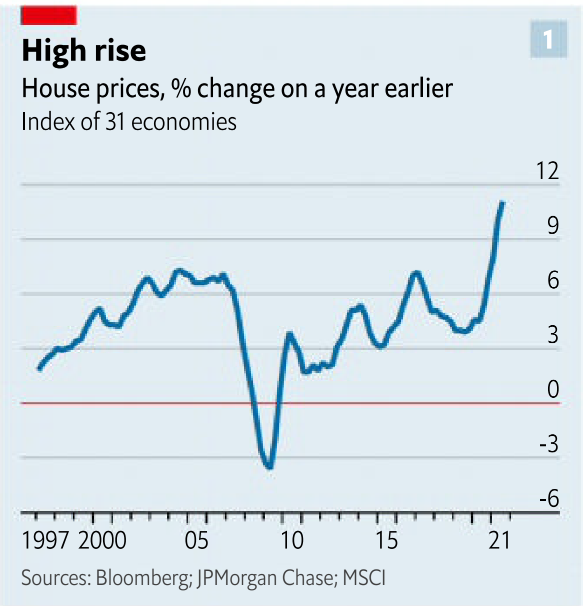
NOVA SCOTIA'S largest city is known for a few things: a big national-security conference that takes place every autumn; a huge explosion that took place in 1917, causing immense devastation; and a small but impressive wine industry. It may soon be known for something else. Since December 2019 house prices in Halifax have risen by nearly 50%, according to Knight Frank, a property firm—a boom that only a tiny number of cities have bettered. Sit down with a Haligonian and before long they will express bafflement at how their city became so pricey.

Local factors play a role. Some people who had moved to distant Alberta to work in the oil industry lost their jobs in 2020 and moved back home. Out-of-towners are investing in local property in the expectation that eastern Canada will become a more desirable place to live as the climate changes. Nevertheless, the broader trend is mirrored across much of the world (see chart 1). The IMF's global house-price index, expressed in real terms, is well above the peak reached before the 2007-09 financial crisis. American housebuilders' share prices are up by 44% over the past year, compared with 27% for the overall stockmarket. Estate agents from Halifax's mom-and-pop shops to the supermodel lookalikes on Netflix's "Selling Sunset", in Los Angeles, have never had it so good.

Now people are wondering whether the party is about to end. Governments are winding down stimulus. People no longer have so much spare cash to splurge on property, now that foreign holidays are back and restaurants are open. Central banks, worried about surging inflation, are tightening monetary policy, including by raising interest rates. In its latest financial-stability report the IMF warned that "downside risks to house prices appear to be significant", and that, if these were to materialise, prices in rich countries could fall by up to 14%. In New Zealand, where prices have risen by 24% in the past year, the central bank is blunter. The "level of house prices", it says, is "unsustainable".

But is it? Certainly there is little evidence so far that the recent tightening in fiscal and monetary policy is provoking a slowdown. In the third quarter of 2021 global house-price growth rose to an all-time high. Although New Zealand's central bank has raised interest rates by 0.5 percentage points since October, there is only the mildest indication that house-price growth is slowing. Property prices are still rising in the Czech Republic, even though the central bank repeatedly raised rates in 2021.

Perhaps it is just a matter of time before the house of cards collapses. But as a recent paper by Gabriel Chodorow-Reich of Harvard University and colleagues explains, what might appear to be a housing bubble may in fact be the product of fundamental economic shifts. The paper shows that the monumental house-price increases in America in the early to mid-2000s were largely a consequence of factors such as urban revitalisation, growing preferences for ▸▸



High rise

House prices, % change on a year earlier

Index of 31 economies

Sources: Bloomberg; JPMorgan Chase; MSCI city living and rising wage premia for educated workers in cities. By 2019 American real house prices had pretty much regained their pre-financial-crisis peak, further evidence that the mania of the mid-2000s was perhaps not quite so mad after all.

Fundamental forces may once again explain why house prices today are so high—and why they may endure. Three of them stand out: robust household balance-sheets; people's greater willingness to spend more on their living arrangements; and the severity of supply constraints.

Take households first. In contrast with some previous housing booms, well-off folk with stable jobs have driven the surge in prices. In America the average credit score for someone taking out a government-backed mortgage is around 750—considered pretty good by most people's standards and far higher than before the financial crisis. In the euro area banks significantly tightened credit standards for mortgages in 2020 (though they have undone that a little since then). For many people getting a mortgage has become harder, not easier.

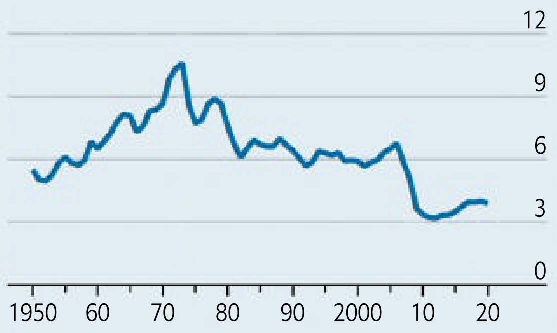
People are also less vulnerable to rising interest rates—and thus less likely to be foreclosed on, which often leads to fire-sales and drags down prices—than you might think. In part this is because rates are rising from a low base. In America mortgage-debt-service payments take up about 3.7% of disposable income, the lowest figure on record. But it is also because other countries are following America down the fixed-rate-mortgage path, which in the short term protects people against increases in borrowing costs. In Germany long-term fixed products are twice as popular as they were a decade ago. In Britain almost all new mortgages are fixed-rate, with five-year deals now more common. According to UK Finance, a trade body, nearly three-quarters of all mortgage borrowers will in the near term be unaffected by the Bank of England's recent rate rise.

Shifting preferences are the second reason why global house prices may stay high. More people are working remotely, meaning greater demand for at-home offices. Others want larger gardens. This race for space explains about half of the rise in British house prices during the pandemic, according to analysis by the Bank of England. Transactions involving detached homes have increased, for instance, while those for flats have declined. Across the rich world household-saving rates still remain unusually high. That may have allowed people to invest more in property.

Where have all the builders gone? 2

Houses built per 1,000 people

11 advanced economies



Sources: UN; World Bank; ABS; European Mortgage Federation; OECD; US Census Bureau; Destatis; DLUHC; Japan Statistics Bureau; SDES; ECB; Istat; HUD; SCB; Statistics Austria; *The Economist*

The third and most important reason why house prices could remain high is housing supply. *The Economist*'s analysis of national statistics and archival records finds that in the years before the pandemic, housebuilding in the rich world, once adjusted for population, had fallen to half its level of the mid-1960s (see chart 2). Housing supply has become ever more "inelastic": increases in demand for homes have translated more into higher prices, and less into additional construction.

In many places the pandemic has dealt a further blow to supply. During the first wave of covid-19 some governments forced builders to down their tools. In the second quarter of 2020 Italian housing starts dropped by around 25%; in Britain they fell by half. Even in places where stay-at-home orders were milder and zoning laws are loose, such as Texas, the pace of extra demand was so rapid that builders could not keep up, slowed down, for instance, by the limited number of carpenters.

Shortages of materials and labour have added to the constraints. Builders are grappling with higher costs and delays for raw materials such as cement, copper, lumber and steel, and a scarcity of tradespeople is pushing wages higher. The bumper earnings and improved margins of some housebuilders suggests that many have been able to pass on cost increases to buyers. DR Horton, America's largest homebuilder, said the average sales price of its homes shot up by 14% in 2021, contributing to 78% growth in earnings per share.

Some supply bottlenecks may now be easing. In October the IMF noted that global housing starts per person had begun to pick up, though they were still "considerably below the levels of the early 2000s". But the world has a long way to go. In May 2021 researchers at Freddie Mac, a "government-sponsored enterprise" which subsidises much of American mortgage finance, estimated that the world's largest economy faced a shortage of nearly 3.8m homes, up from 2.5m in 2018. Other estimates put the shortfall closer to 5.5m. In England an estimated 345,000 new homes per year are needed to meet demand, but builders are further away from the target than they have ever been. Unless something profound changes, pricey property may be around for a while yet. ■

Sustainable investing

Gold standard

The EU's green labelling scheme could go global

HOURS BEFORE Brussels entered 2022, a bombshell dropped. In a draft sent to EU countries, the European Commission proposed classing some nuclear and gas projects as green in its "taxonomy", a list meant to define sustainable investing. Austria threatened to sue; Germany cried foul (see Europe section). The plan is still likely to win majority support from member states, which have until January 12th to opine. It could set the terms for green investing well beyond Europe. But will it steer capital towards deserving projects?

The idea emerged after the 2015 Paris climate deal, when the EU's effort to craft a common green-bond standard for corporate and sovereign issuers revealed that members did not agree on what counted as green. Some countries have since worked on their own classifications, but Europe's, which maps swathes of the economy over 550 pages, is the most comprehensive.

The taxonomy hopes to end the practice of greenwashing and boost investors' faith in sustainable assets. It will offer a common set of criteria that investors and banks can use to screen potential investments. Most money managers already have their own teams and tools to measure greenery. But the lack of a shared benchmark means scorecards remain subjective and inconsistent across the industry, which confuses investors. Having a dictionary where they can look up whether an investment can be labelled green puts everyone on the same page.

Another aspect of the plan is to link the taxonomy to disclosure. Starting later this year, some 11,000 listed European firms will have to report how much of their sales and capital expenditure fits within the classification (the number of businesses covered will eventually expand to 50,000). Since January 1st asset managers must already detail what share of the products they label sustainable is compliant with the bits of the taxonomy that are already in force. From 2024 most European banks will also have to report a "green asset ratio" using the same criteria. All this should put more and better climate-related data in the public domain. "It is our best hope globally to measure how much money is going into activities aligned with net zero", says Daniel Klier of Arabesque, an asset manager.

Eventually the classification will also underpin EU certifications for securities issuers, creating a direct link with capital markets. The green-bond standard, for one, is expected to use the taxonomy as its benchmark for eligibility. The commission will probably also use the classification as it doles money out to member states from its Recovery Fund, some of which is linked to greenery.

The degree of detail and stringency of Europe's approach could help make the taxonomy the global gold standard. Other countries outside the bloc are working on schemes of their own. Each will probably be moulded by political compromises, geostrategic concerns and carbon pledges. But foreign companies, asset managers and banks could end up adopting the EU's taxonomy anyway, because their European clients may need them to report the right data, so as to produce their own disclosures. Some may lobby their own governments to limit divergence.

Whether all this is enough to channel funds towards the right investments is another question. One immediate problem relates to implementation: because of missed deadlines, green-finance firms are being asked to report on their compliance with the taxonomy before companies are required to provide the underlying data, making the job difficult.

A bigger drawback is the taxonomy's limited coverage. At present it applies to a subset of economic activities. Disclosure requirements also let small public companies, and all private ones, off the hook. Morningstar, a research firm, reckons it will affect just half of fund assets in the EU (excluding private vehicles). That leaves much in the dark at a time when listed giants, including miners and utilities, are rushing to divest their dirtiest assets to private investors. More may come to light as the EU's reporting requirements expand to cover new companies, some of them private. But that will take time.

The biggest problem lies in the flawed expectation that the mere existence of the taxonomy will alter investors' preferences. A project's greenery is just "one data point", says David Henry Doyle of S&P, a rating agency. Creditworthiness, interest rates and earnings prospects may matter more. The classification, notably, creates no incentive for backing green assets that are starved of funding, such as low-carbon steel or electric-car charging stations. Instead investors may continue to chase safe, liquid assets such as wind or solar plants, jacking up prices. Green is good, but it is not enough. ■

Correction: In last week's article on winners and losers from the pandemic, the calculations underlying our league table contained errors for Japan's household income and Greece's public debt. As a result, America should in fact be ranked ninth (not tenth), Canada tenth (not 11th) and Japan 21st (not equal 20th). Sorry. For the full ranking, see economist.com/winnersandlosers

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America's financial rules

Regulatory flex

WASHINGTON, DC

A boardroom bust-up reveals Joe Biden's distaste for big banks

"POWER GRAB". An "attempt to politicise our regulators for their own gain". "Extremist destruction of institutional norms." The rhetoric flying around Washington sounds like the criticism once levelled against President Donald Trump about hot-button issues from border security to pollution controls. Instead, it is Republicans who have directed these barbs at Democrats in recent days, focused on something that, on the surface, seems far duller: the Federal Deposit Insurance Corporation, the agency tasked with protecting savers from bank busts.

As the heated language suggests, the stakes are in fact high. Along with insuring bank accounts, the FDIC is one of the institutions that approves bank mergers in America. That makes it a crucial player in the Biden administration's plans to impose stricter rules on the financial system. And the Democrats have now taken full control of it after a nasty boardroom battle.

Democrats already held three of five seats on the FDIC's board, which should in theory have let them have their way. But the chairwoman was still Jelena McWilliams, a respected lawyer appointed by Mr Trump. She had the power to set the agenda for meetings. The Democrats alleged that she used it to block a review of the policy for bank mergers—which she has denied.

The dispute exploded publicly last month when two Democrats on the board, including Rohit Chopra, director of the Consumer Financial Protection Bureau, attempted to work around Ms McWilliams. They announced that the Democratic majority had voted for a review of bank-merger rules, without her support. Ms McWilliams countered that there had not been a valid vote. In an article in the *Wall Street Journal*, she accused them of plotting "a hostile takeover of the FDIC". On December 31st, with the board split beyond repair, she announced her resignation.

The clash is a window onto the efforts of progressives within the Democratic party to make their mark on the institutions overseeing the economy. Mr Chopra is an ally of Elizabeth Warren, a senator who is a champion of the Democrats' left wing. Others liked by Ms Warren—notably, Lina Khan, head of the Federal Trade Commission, and Gary Gensler, chairman of the Securities and Exchange Commission—are also in key roles.

Progressives have not won all the personnel fights. Saule Omarova, their preferred candidate to lead the Office of the Comptroller of the Currency, a banking regulator, withdrew from the nomination process in December after Republicans decried her as a "radical". The reappointment of Jerome Powell as head of the Federal Reserve was another disappointment for the left. Yet with three seats open on the Fed's board, progressives can make inroads. Most crucially, Mr Biden is expected to nominate Sarah Bloom Raskin, another preferred candidate of Ms Warren, as the Fed's vice-chairwoman for supervision, the most important regulatory post in the financial system.

What do the progressives hope to achieve? It is already clear that they want to curb big tech. The row at the FDIC reveals that they also intend to limit the formation of big banks. For now the review of the bank-merger policy is just a request for information. But the questions posed by Mr Chopra in a blog post in December leave little doubt about his desired direction: "Should financial institutions that routinely violate consumer-protection laws be allowed to expand through acquisition? …How should we make sure that a merger does not increase the risk that a bank is too big to fail?"

Many bank analysts like the idea of midsized American firms banding together to take on the big four (JPMorgan Chase, Bank of America, Citigroup and Wells Fargo). Progressives would argue that this gets things backwards. If the power of giant banks imperils financial stability, the creation of yet more giants would only exacerbate that, says one official. Other possible changes include integrating climate concerns into financial regulation and beefing up some capital requirements. Democrats will, as ever, need to surmount legislative and lobbying hurdles to make any of this happen. But with the FDIC now firmly in their grasp, the path is a little clearer. ■

McWilliams makes an exit

Economics

The new consensus

A new study finds that economists are agreeing with each other more

OBSERVERS HAVE long poked fun at the inability of the economics profession to make up its mind. "If parliament were to ask six economists for an opinion, seven would come back," runs one version of an old joke. Yet the gibes may be losing their force. A new paper, by Doris Geide-Stevenson and Alvaro La Parra Perez of Weber State University, finds that economists are agreeing with each other more on a number of policy-related questions.

The paper publishes the results of the latest wave of a survey of economists that has been conducted roughly once a decade since 1976 (though the results of the first wave are not entirely comparable with later ones). Members of the American Economic Association were asked whether they agreed with a number of propositions, ranging from the economic impact of minimum-wage increases to the desirability of universal health insurance. Based on the frequency of responses, the researchers devised an index that captured the degree of consensus on each question.

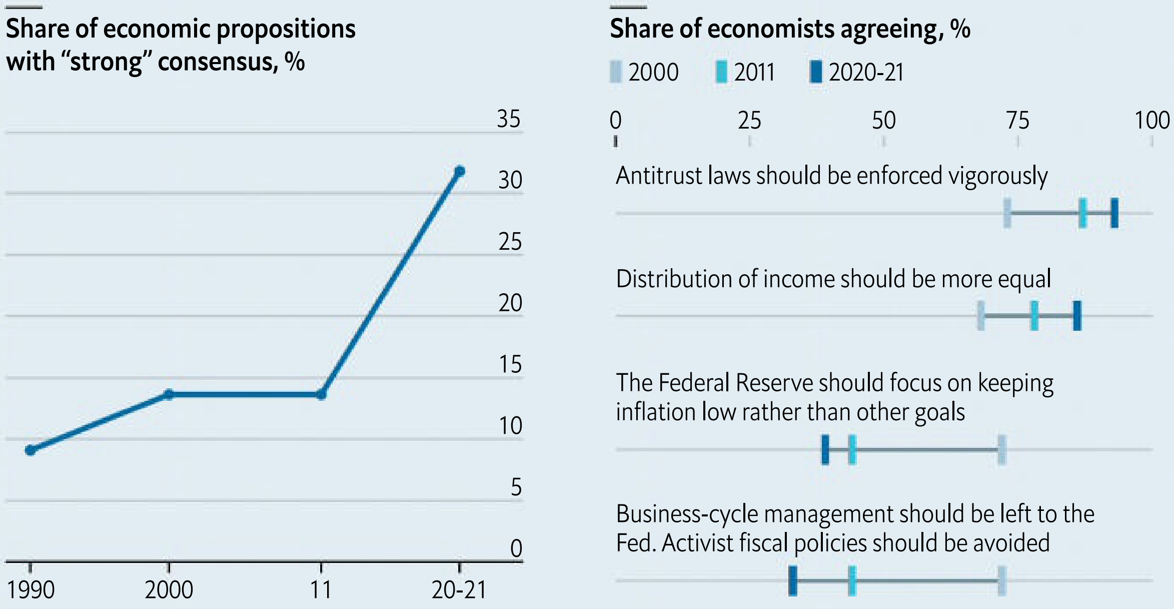
The results suggest that the extent of consensus has risen significantly. Economists were in strong agreement on about a third of the propositions in the latest wave, compared with around 15% in 2011 and less than 10% in 1990 (see chart, left-hand panel). Respondents were more united on their diagnosis of economic problems. And, strikingly, more of them were convinced of the need for muscular policy.

Inequality was a growing concern. The share of respondents who wholly or somewhat agreed that the distribution of income in America should be more equal rose from 68% in 2000 to 86% in 2020-21. Fully 85% thought corporate power was too concentrated. Another worry was climate change, which most agreed posed a big risk to the economy. (Both questions were asked for the first time in the latest wave.)

Unsurprisingly, given their views on market power, respondents' support for a vigorous use of antitrust policy has increased markedly over the past two decades (see chart, right-hand panel). Another notable change was in the enthusiasm for fiscal activism. More economists thought that the Federal Reserve alone could not manage the business cycle—perhaps consistent with the decline in its policy rate towards zero—and were keener on a bigger role for government. More of them also agreed that fiscal policy could have important economic effects, both during downturns and over the long term.

The dismal science has not become entirely harmonious, though. Economists were slightly more split on the consequences of lowering income and capital-gains taxes in the latest wave, with roughly half of respondents agreeing with the propositions put to them by the researchers, and the rest disagreeing. Enough room, still, for healthy debate.

Finding common ground
United States, survey of economists


Share of economic propositions with "strong" consensus, %

Share of economists agreeing, %

Source: "Consensus among economists 2020—a sharpening of the picture", by D. Geide-Stevenson and A. La Parra Perez, Dec 2021 (working paper)

Troubled banks in China

North-eastern exposure

HONG KONG

Could a struggling region be home to China's next banking disaster?

"CABBAGE HOMES" have brought some notoriety to Hegang in recent years. Flats in the small city in China's far north-east have been selling for outrageously low prices—some for just $3,500 apiece—earning a comparison with the cheapest items in vegetable markets. The region's economic outlook has been so poor for so long that it cannot retain residents. The city, which is in Heilongjiang province, has lost about 16% of its population in a decade. The cabbage homes were built by the government to help alleviate poverty, but they have found few takers. The local government is now struggling to make good on its debts and is restructuring its finances. In late December officials said they had stopped hiring new government employees in order to save money.

Hegang is one of many gloomy stories from China's rustbelt provinces of Heilongjiang, Jilin and Liaoning. The region bordering Russia, known for its long, bitterly cold winters, has slogged through years of depressed economic conditions as state-owned industrial plants have closed down and young people have migrated south. Poor energy infrastructure meant that companies in the area were disproportionately affected by an acute power shortage in 2021. In a desperate attempt to keep families from moving away and to spur population growth, Jilin has announced that it will hand out "marriage and birth consumer loans" of up to 200,000 yuan ($31,500) to couples.

▸▸

The destitution is also raising concerns about the region's banks, the combined assets of which amounted to 15.8trn yuan in September. Bad debts are already higher in the north-east than in any other area of China; loan-loss provisions are the lowest. Yet spotting a crisis in the making is a tough task. Hiding bad debts is an easy trick for smaller banks. Local regulators are understaffed. And domestic credit-rating agencies cannot be counted on to identify problem lenders. In the first seven months of 2021 rating agencies downgraded just six banks. They often take action only when a lender is on the brink. Huancheng Rural Commercial Bank, based in Jilin, for instance, suddenly declared that its net profits had fallen by 42% not long after it was downgraded.

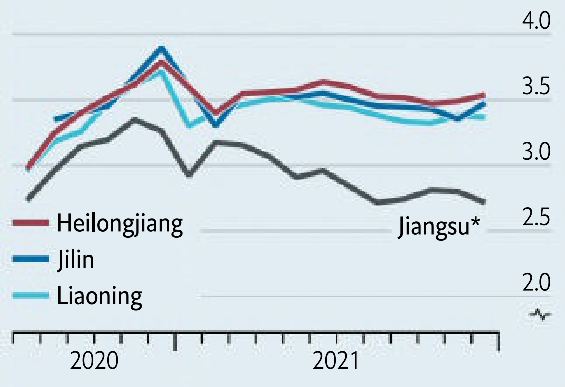
For an insider's view on China's problematic banks, look at how much investment managers at the country's biggest lenders charge smaller ones for loans. Most banks across China pay similar yields on negotiable certificates of deposit (NCDs), securities that resemble short-term loans from one bank to another, and which trade in the interbank market. Yields paid on NCDs issued by most banks across the country fell throughout 2021, signalling a decrease in perceived risk. Yet those paid by issuing banks in the three north-eastern provinces diverged from the rest throughout 2021 (see chart).

The average premium paid on one-year NCDs issued by banks in Liaoning, compared with those in healthier provinces, shot up from about 0.24 percentage points in February to 0.65 towards the end of the year, according to Enodo Economics, a research firm. Banks in Heilongjiang and Jilin have paid similar premiums. The higher yields indicate that large banks believe the local governments of the north-east may struggle to bail out their financial institutions in the event of a crisis, analysts at Enodo said. (The surveyed NCDs were all still rated as AAA, the safest possible, by rating agencies, however.)

The north-east is a prime contender to host China's next banking disaster. Of the four major bail-outs of city commercial banks since 2019, two have been based in the region. Failures of regulation and corporate governance have meant that some institutions have come under the influence of private corporations or individuals, who have skewed their lending. Shengjing Bank, a large bank based in Liaoning with assets of 1trn yuan, has a high level of exposure to Evergrande, a failing property developer. Some of the region's lenders have lost billions of dollars when financial products have gone sour. Regulators in Liaoning recently planned to merge 12 troubled banks together in an attempt to prevent a crisis. That plan was later watered down to just two. It is unclear how the problems at the remaining ten lenders will be handled. ■

Out in the cold

Chinese banks, yields on negotiable certificates of deposit, by province, %



Sources: Enodo Economics; Wind

*Representative of other low-risk provinces

Asset management

Direct to market

The rise of personalised stock indices

In 2001 Andrew Lo, a professor at the Massachusetts Institute of Technology, predicted that technological advances would one day allow investors to create their own personal indices designed to meet their financial aims, risk preferences and tax considerations. Such an idea "may well be science fiction today", Mr Lo wrote, but "it is only a matter of time." More than 20 years later, that time may have come.

A revolution in passive investing that began in the 1970s led to the introduction of funds that track the performance of an index, such as the S&P 500, affording investors diversification at a low cost. Now a growing number of American fund managers and brokers are offering retail clients more personalised products that combine the benefits of passive investing with greater customisation. Direct-indexed accounts, as such products are known, promise to track the performance of a benchmark index. But unlike off-the-shelf mutual funds or exchange-traded funds (ETFs), which are pooled investment vehicles overseen by portfolio managers, investors in direct-indexed accounts own the underlying securities, and can tailor their portfolios to suit their needs.

The idea is not new. "Separately managed accounts", custom portfolios of securities managed by professional investors, have been around since the 1970s. But such products have historically been available only to institutional investors and "ultra-high-net-worth" clients with millions of dollars to invest. Today direct-indexed accounts are within reach of the "mass affluent", with liquid assets in the hundreds of thousands. "It's what institutions have been doing for years," explains Martin Small, head of the US wealth-advisory business at BlackRock, an asset manager. "But with technology and scale and more automation, we can deliver it in smaller account sizes."

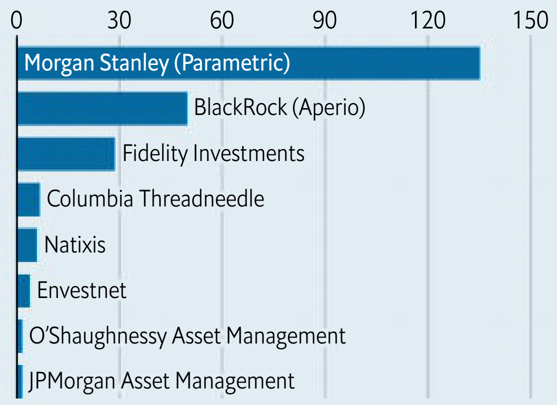
Analysts point to three forces behind the trend. The first is advances in technology, including sophisticated algorithms and the computing power needed to continuously analyse and execute trades across hundreds of thousands of portfolios simultaneously. The second is the rise of zero-commission trading, which dramatically lowers costs. The third is the emergence of fractional-share trading, which allows investors to buy securities in bite-sized pieces, making it easier to build small diversified portfolios. Companies like Amazon, a single share of which costs more than $3,000, can be included without breaking the bank.

Direct indexing is still a small part of the asset-management industry. According to Cerulli Associates, a research firm, roughly $400bn was held in direct-indexed accounts by the end of June 2021. But Morgan Stanley, a bank, and Oliver Wyman, a consultancy, estimate that this figure could reach $1.5trn by 2025, representing a growth rate of nearly 40% a year. Industry executives are bullish. "Personalised investing is coming at all of us like a freight train," Walt Bettinger, the boss of Charles Schwab, a broker, said in October.

Such enthusiasm has fuelled a flurry of acquisitions. In October 2020 Morgan Stanley acquired Parametric Portfolio Associates, the biggest provider of direct-indexing services. A month later, BlackRock snapped up Aperio Group, another big provider. Several other big fund managers and brokers, including Charles Schwab, Vanguard and Franklin Templeton have made similar acquisitions. "Nobody wants to be left behind," says Kevin Maeda, the chief ▸▸

DIY diversification

United States, assets under management of selected direct-indexing providers, June 2021, $bn



Source: Cerulli Associates

investment officer of direct indexing at Natixis, a bank. “There’s a gold-rush mentality,” reckons Tom O’Shea of Cerulli.

Direct indexing has both benefits and costs. Its main selling point is its ability to lower tax bills. This is achieved primarily through a process called “tax-loss harvesting”, which involves selling and replacing losing stocks to offset gains in winning ones, thereby reducing capital gains subject to taxation. Although this technique can generate returns on the order of 1-1.5% per year, the benefits are close to nothing for individuals in lower tax brackets, or for investors who hold the bulk of their assets in retirement accounts, such as 401(k) plans, which defer taxes on investment gains until funds are withdrawn.

Another advantage of these accounts over conventional mutual funds or ETFs is customisation. For ethically minded punters, this could mean excluding fossil-fuel producers, tobacco companies or weapons-makers. The more customisation, the greater the likelihood that portfolio returns diverge from benchmark returns.

Direct-indexed accounts are often characterised as a disruptive threat to mutual funds and ETFs. In truth they are part of the same long-term trend. “This is really about the growth of indexing,” says Mr Small of BlackRock. “The growth of direct indexing and ETFs go together, they’re just different ways to gain index exposure,” he adds. Brian Langstraat of Parametric Portfolio Associates says that the primary driver of direct indexing is not lower costs or fractional shares but the decades-long shift towards passive investing. “The trends that are behind it are the same ones as five years ago,” he says, “and will be the same ones five years from now.” ■

Buttonwood Lost lustre

Why some of gold’s charm has faded

INFLATION IS SURGING, central-bank money-printing has run amok and political tensions between the world’s powers are intensifying. These ingredients sound like a waking fantasy for ardent believers in the long-term promise of gold. Even mainstream investors might have been tempted to increase their holdings of the precious metal. Why then was it unable to eke out even a marginal gain in 2021, recording its worst annual performance in six years?

For conventional investors, valuing gold poses a problem. The precious metal does not generate a stream of income. Since demand for it tends to be speculative, the cash-flow models used to work out whether assets are cheap or expensive cannot be applied.

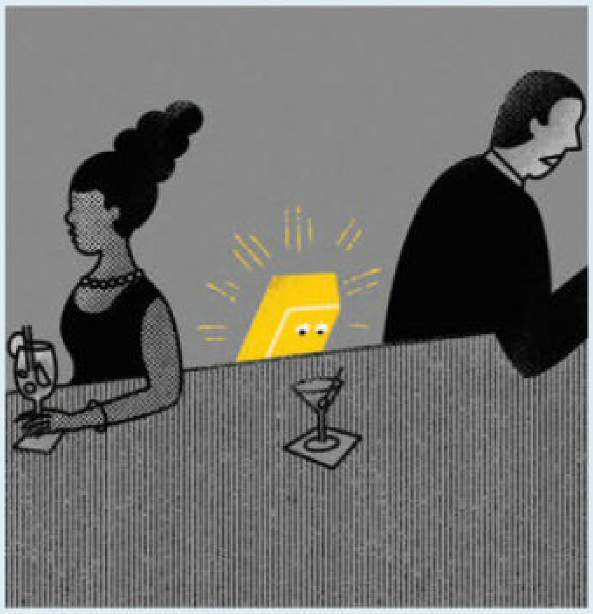
One measure, however, contains predictive power. Every big move in the price of gold, particularly in the period since the global financial crisis, has been inversely correlated with moves in real interest rates. There are few financial relationships that have held up as well as that between the price of gold and the yield on inflation-protected Treasuries (TIPS). The lower real, safe yields are, the greater the appeal of an asset without a yield that may rise in value.

Part of the explanation for gold’s underwhelming performance last year is that this relationship continued to hold. Despite the frenzy over inflation, ten-year real interest rates began the year at -1.06% and ended at -1.04%. Gold ended 2021 at around $1,822 per troy ounce, practically flat on the year. Over the past decade, though, gold has been the less reliable of the two. If you had simply held the iShares TIPS bond exchange-traded fund in that time you would have made 35%, more than double what you would have earned by holding gold.

Regulation has also dulled the precious metal’s sheen. New rules on bank-funding ratios, as part of the Basel III accord, came into effect in the EU in June and in Britain on January 1st. These consider government bonds to be “high-quality liquid assets”. By contrast, holders of gold, like those of equities, must match 85% of their holdings with funding from stable sources. That makes gold costlier for banks to hold, and puts it at a disadvantage compared with Treasuries. If the yellow metal is simply a less reliable proxy for TIPS, without the friendly regulatory treatment, why bother?

The answer for some investors would once have been clear. Paper money and government-issued bonds are ephemeral, and catastrophic failures of financial systems often stem from overconfidence in their safety. But gold, the argument goes, has stood the test of time. The dollar became America’s national currency only in 1863. People have prized precious metals for millennia.

Yet gold’s status as the final line of defence against currency mismanagement is also being contested. Cryptocurrencies, particularly bitcoin, are increasingly found in more mainstream portfolios. The asset class was once too small to dent the appetite for gold. Now bitcoin and ether, the two biggest cryptocurrencies, have a combined market capitalisation of around $1.3trn, ten times what it was two years ago. That is around a tenth of the perhaps $12trn of gold holdings, based on the World Gold Council’s estimate that a little over 200,000 tonnes of the yellow metal exists above ground.



In 2020 Chris Wood of Jefferies, an investment bank, and a long-time advocate of gold, signalled which way the wind was blowing. He cut his rather sizeable recommended allocation to physical bullion for dollar-based pension funds from 50% to 45% and redirected the five percentage points to bitcoin. In November last year he did the same again, raising the bitcoin allocation to 10%, at the expense of gold.

Bitcoin’s wild price swings may for now limit the interest of the more conservative gold bug. Over the past five years the gold price has moved—both up and down—by an average of 0.6% a day, compared with a daily move in bitcoin of 3.5%. But that need not be a show-stopper in the long run. As analysts at Morgan Stanley have noted, gold also began its life as a modern investment asset in the mid-1970s and early 1980s with bouts of extreme volatility. It took almost two decades after the ownership of gold was legalised in America in 1974 for it to become widely held by institutions.

A spell of comparative irrelevance for the metal, then, cannot be ruled out. Stuck between more reliable, safe assets on one side and more exciting, speculative crypto-assets on the other, gold now finds itself in an awkward position.

Free exchange | Blood on the dance floor

Was the IMF cruelly kind to Argentina?

INFLATION IN ARGENTINA had intensified, the IMF lamented. The cost of living had increased by some 50% over the course of the year. "The most important source of inflation", the fund explained, "was government-deficit spending, financed by borrowing from the central bank." The deficit, in turn, reflected excessive wage demands and the failure of the country's utilities to raise prices in line with costs. The year was 1958. At the end of it, Argentina turned to the fund for its first "standby arrangement", a line of credit accompanied by a plan to stabilise the economy.

Sixty years later, in June 2018, Argentina was back for its 21st arrangement: a $50bn loan, later increased to $57bn, backed by the government's promises to cut the budget deficit and strengthen the central bank in the hope of quelling inflation and stabilising the peso. The loan was the largest in the IMF's history. It has left Argentina so in hock to the fund that the country will need a new longer-term loan to help it repay its existing one. Despite its size, the rescue failed to save Argentina from default and despair. It has also left the fund heavily exposed to a single country when many other emerging economies may soon need its help.

The IMF's dance with Argentina over the decades has attracted plenty of criticism. The institution has been variously described as too indulgent and too punitive, too kind and too cruel. Conservative critics think the fund has been seduced by its dance partner, wasting public money in a futile battle with market forces. The left, on the other hand, thinks the fund is both neocolonial (ie, too bossy) and neoliberal (ie, too enamoured of free markets).

The fund's latest critic is the fund itself. Shortly before Christmas it published a lengthy evaluation of its 2018 arrangement with Argentina, led by staff who had not been involved with it. It concludes that the rescue was not "robust" enough to withstand the foreseeable risks it faced. Argentina's economy, the report points out, suffers from some longstanding structural weaknesses. Its public finances are notoriously fragile (only 15% of the workforce pay income tax, according to the OECD, and energy is heavily subsidised). Its financial system is shallow, which tempts the government to borrow from fickle foreigners instead. Its range of exports is narrow. Inflation is stubbornly high and responds only fitfully to tighter monetary policy. Argentines like to hold their deposits in dollars. And they often price things with reference to it. That means that inflation rises quickly when the peso drops.

The government of Mauricio Macri, which requested the IMF loan, also faced tight political constraints. His centre-right party did not hold a majority in the legislature, and he had to stand for re-election in 2019, before any painful economic reforms would have time to bear fruit. Given these difficulties, the fund knew the loan was risky. Yet it did not insist on adequate contingency plans upfront, the evaluation points out. At the outset, the fund hoped that a big loan would restore the confidence of foreign investors, stabilising the peso and allowing the government to roll over its dollar debt on reasonable terms. The government's liabilities would then prove easier to bear and the confidence of its creditors would be self-fulfilling. Moreover, Argentina might not need to draw down its IMF credit line entirely, leaving the fund less exposed to the country than the headline amount suggested.

This gamble soon failed. Foreign capital kept retreating, the peso kept falling and inflation kept rising. The evaluation speculates that the size of the IMF's loan may even have been "self-defeating", eroding confidence rather than inspiring it, since foreign investors knew the fund would be repaid before them.

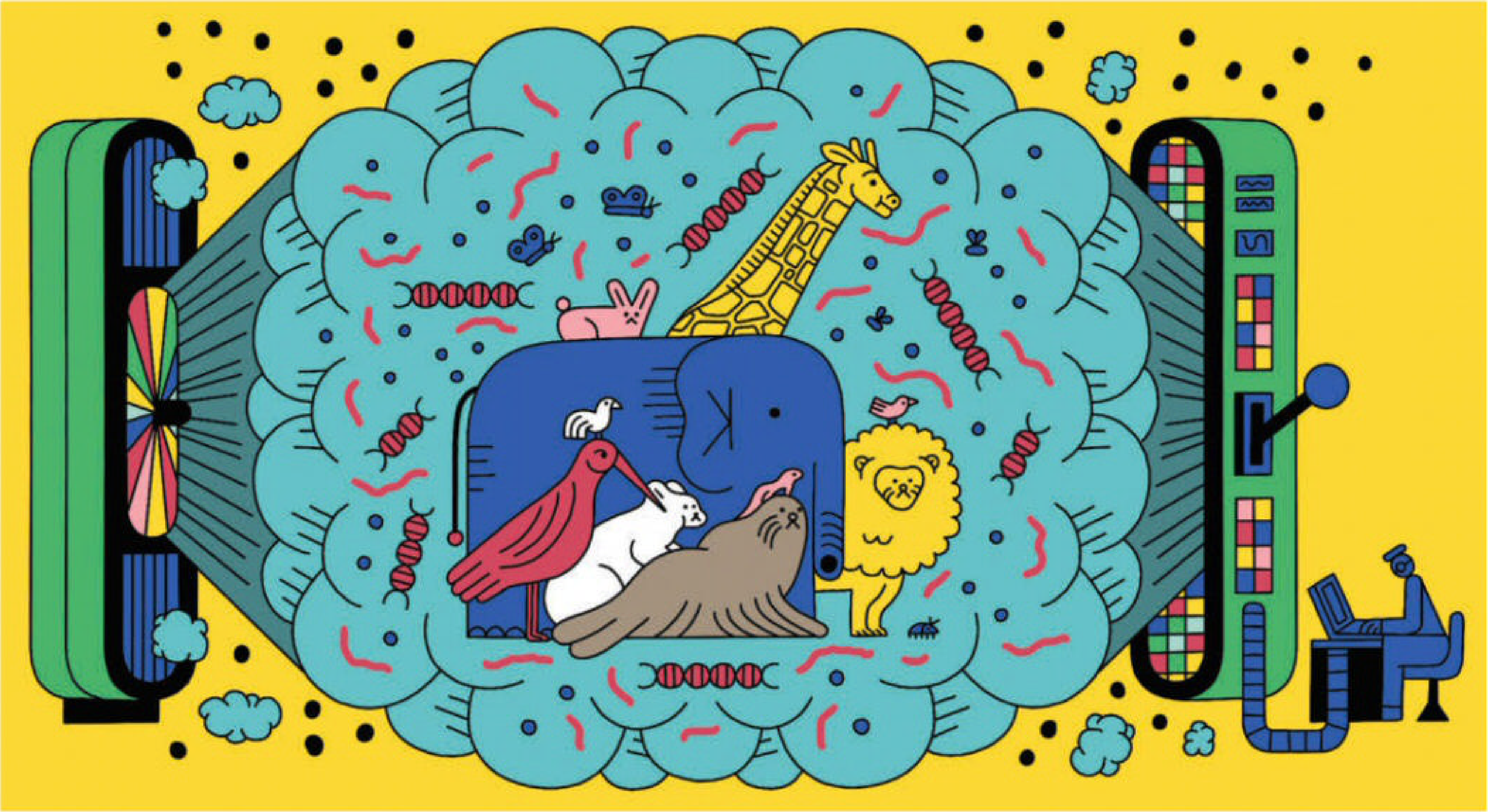
In October 2018, once it became clear that Argentina would need all the money it could get, the IMF agreed to enlarge the loan and disburse it more quickly. The new plan called for an even smaller deficit and even tighter monetary policy. At times, the revised plan seemed to be working. But a jump in inflation in early 2019 caught everyone by surprise. And any remaining hopes of success were dashed when it became clear Mr Macri would lose that year's election. In its last months, his government had to impose capital controls to stem capital flight. The leftist government that succeeded his defaulted on the country's foreign debt.

What kind of contingency plans should the fund have insisted on? The evaluation singles out an "early" debt restructuring (in which the government would have asked its creditors to accept a delay or decrease in repayments) coupled with capital controls to prevent money fleeing the country. That would have eased Argentina's debt burden. And it might have left more IMF money for later, helping bolster the country's foreign-exchange reserves and rebuild confidence in the aftermath of the debt write-down.

Own goal

But if such a plan had become public, it would have rocked market confidence, precipitating the damage it was designed to limit. And it might also have violated the government's "red lines", which ruled out such measures because it regarded them as a hallmark of Argentina's uncreditworthy past. The evaluation concedes that stabilisation plans do not work if governments do not feel they "own" them. But "ownership", it says, "should not be understood as a willingness to defer to [a government's] preference for suboptimal policy choices." The IMF should not, in other words, let governments make their own mistakes with the fund's money.

The evaluation alludes indirectly to another implicit goal of the IMF in Argentina: to rescue its own dismal reputation in the country. Had it insisted on an early debt restructuring coupled with capital controls, it might have distanced itself further from its reputation for free-market fundamentalism. But to have pressed such a plan on Argentina, against the wishes of its democratically elected government, would have entrenched its reputation for bossiness. In the case of Argentina, a less neoliberal approach would have been more neocolonial. ■



Ecology

Something in the air

DNA sniffers can now detect which animal species are living in an area

IN THE PAST, studying ecosystems for signs of change has needed lots of boots on the ground. Plants, being sedentary, can be recorded easily by unleashing an infantry of PhD students eager to make a name for themselves. Taking a census of an area's animals is, however, a different matter. It frequently involves sitting quietly for hours on end, noting which species walk, flutter or slither by, and what they are up to. Sometimes, the troops assigned to do this see a lot. Sometimes not.

Any viewer of crime dramas might think, though, that there is a better way. Just as DNA traces on an unwashed glass or a carelessly discarded cigarette butt can place a suspect as having been in a particular place, so can DNA shed by a creature as it goes about its business. Ecologists have thought of this, and it certainly works for things like animal droppings. But these, too, must first be detected and collected—and they will identify only the animal that dropped them. What would really speed things up would be a means of sampling an entire habitat at one go.

Such an approach is called metagenomics, and it does already exist. But, at the moment, it is applied mainly to bodies of water and to soil, rather than to open-air dry-land habitats. Several groups of researchers would therefore like to extend it more widely—by plucking the DNA concerned from thin air.

Sniffing around

Two of these groups, one led by Christina Lynggaard of the University of Copenhagen and the other by Elizabeth Clare of York University, in Toronto, have used zoos to test ways of extracting DNA from the atmosphere. Zoos are ideal for this because they house known animals. Both groups have just published preliminary results in *Current Biology*. Others, meanwhile, are already looking in the wild.

Dr Clare's team adapted an existing sample-collection method by pumping air through filters normally employed to extract DNA from water. Dr Lynggaard's team tried three approaches. The first percolated the air to be analysed through some water, to try to dissolve any DNA it was carrying and so permit that DNA to be analysed by conventional metagenomic methods. The second and third used fans—in one case large, of the sort employed to cool big computers in data centres, and in the other small, used to cool desktop devices. In both instances these fans blew air through filters of the type that air-conditioning systems use to remove particles of pollution.

Dr Lynggaard's zoo of choice was Copenhagen's. She put testing stations inside some of the animal houses and the rainforest house, and also near several outdoor enclosures. She let the water-percolation and large-fan systems run for 30 minutes. The small-fan system was allowed a more generous 30 hours to do its stuff.

Dr Clare, meanwhile, chose Hamerton Zoo Park, in Britain. She, too, ran her tests for 30 minutes at a time, and did so at a score of sites, both indoors and out.

Both groups scored palpable hits. All three of Dr Lynggaard's methods detected 30 mammal species living nearby. Some, such as white rhinos, golden lion tamarins and Eastern grey kangaroos, were exhibits in the zoo. But many were not. Her equipment also noted, for example, red squirrels, hares, brown rats and domestic cats. Dr Clare's findings were similarly encouraging. Her group not only logged 17 nearby zoo animals, but also eight other types of mammals and birds. These included

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hedgehogs, a species that has undergone a precipitous decline in Britain in recent years, and which is thus precisely the sort of creature that is of interest to those conducting ecological censuses.

Aerial metagenomics does, then, seem to work. But vertebrates, big and showy though they are, are by no means the only important fauna in an ecosystem. Arguably, insects are more so. And Fabian Roger, an entomologist now working at ETH Zurich, in Switzerland, has shown that the technique works with them, too, and can even yield novel information about an area's inhabitants.

Dr Roger carried out his study in collaboration with colleagues from Lund University in Sweden when he was working there before his move to Zurich. Lund is just across the Oresund bridge from Copenhagen, and it was a system similar to Dr Lynggaard's water-percolation approach that he used. One of his chosen sites was the roof of Lund's ecology department—a well-established location for moth surveillance using conventional light traps. The other was in a forest in Smaland, a province of Sweden a little to the north of Lund. Here, the principal targets were bees and butterflies, which in this case had been monitored the old-fashioned way, using the booted ecological infantry.

Dr Roger has not yet published his results in a journal, but he reported them in December at an online conference called Ecology Across Borders. His version of the percolation system detected a combined total of 85 insect species at the two sites, 77 of which had been missed by more conventional sampling. It also recorded nine vertebrates (various frogs, birds and mammals) and lots of invertebrates other than insects. On the other hand, it missed 81 insect species shown by the other methods to have been present. It was especially bad at moths, noting a mere nine species while the traps caught a whopping 48. It did, though, manage to pick up five moth species that the traps had not.

Something which surprised both Dr Clare and Dr Lynggaard was that their zooquests detected not only exhibits, local wild animals and pets, but also some species that were none of those things. Dr Lynggaard's equipment logged three fish: roach, smelt and salmon. Dr Clare's sniffed DNA from cows, pigs and chickens.

The probable source of these is feeding time. Copenhagen Zoo keeps storks, seals, sea lions, polar bears and crocodiles. All are piscovores, and the fish Dr Lynggaard detected are regularly on their menus. Hamerton, meanwhile, has a proud collection of terrestrial carnivores, including tigers, cheetahs, lynx and maned wolves. These frequently dine on chicken, pork and beef.

It is one thing to pick up DNA from a living animal that is constantly shedding hair, skin cells, sweat and, indeed, urine and faeces. It is quite another to detect it from an inert lump of meat—even allowing for that meat having been mauled while it was being eaten. This discovery might be used to help a branch of conservation different from the habitat monitoring that Dr Clare, Dr Lynggaard and Dr Roger have in mind, for it could be employed to create devices that detect species in which international trade is illegal.

Such species are often hidden contraband—pangolin meat on its way to market, for example. But the technique could also help distinguish whether something that was being imported openly, like a cargo of fish, was actually what it claimed to be rather than an endangered lookalike.

Early warning

Returning to the question of monitoring wild habitats, sampling airborne DNA might give early notice of the arrival there of new species—whether naturally from nearby, as a consequence of things like climate change, or more artificially, from far away, by the introduction of an alien and potentially disruptive organism. In the second case, early detection might allow action to be taken before the invader became established.

Conversely, DNA sniffing might one day give warning when a local species was in trouble, though it is not yet sensitive enough to do that. Also, as Dr Roger's results demonstrate, it works best at the moment as an addition to, rather than a substitution for, established methods, so eager PhD students need not fret about redundancy just yet.

But one thing which has proved true so far about DNA-related technology is that it gets better and cheaper as time passes. Whether it will ever get to the point when ramblers through wood and over meadow will have to get used to the sight of DNA sniffers keeping a nose on the local ecology remains to be seen. But the results which Dr Lynggaard, Dr Clare and Dr Roger have come up with suggest that such sniffers will, at the least, be a valuable addition to ecologists' arsenals. ■

Plant breeding in orbit

Greenhouses in the sky

Radiation and microgravity may give rise to better crops

PLANTS GROWN in orbit, and thereby deprived of the comforting directional pull of Earth's gravity, typically struggle to distinguish up from down. This makes it harder for them to carry water and nutrients around themselves. It also fouls up their ability to draw carbon dioxide needed for photosynthesis from the air. The stress caused by all this seems to increase the level of genetic mutation induced by a given amount of radiation—of which there is much in space, in the form of cosmic rays and effluvia from the sun. And mutations are the lifeblood of plant breeders.

On Earth, breeders induce them by exposing plants and seeds to radioactive isotopes, X-rays and so on. Most are harmful. But some hit the jackpot, conferring properties like drought resistance, blight resistance or shorter stems, favoured by farmers, and sweeter flavours, brighter colours or thinner peel, favoured by consumers. Plucked from their progenitors by selective breeding and added to cultivars, such mutations are worth millions. Mutagenesis, then, is an important business.

And it is one that StarLab Oasis, a firm in Abu Dhabi that was spun out of a Texan enterprise called Nanoracks in 2021, reckons it may be able to perform better. As the firm's name hints, the plan is to do the job using the natural radiation of space. Its researchers intend to start sending payloads of seeds to the International Space Station (ISS) later this year. Once there, those seeds will be cultivated by astronauts on board the station and allowed to grow and breed.

Subsequent generations of seeds resulting from this breeding will be returned to Earth and germinated in StarLab Oasis's greenhouses. They will then be subjected to ills including drought, pathogens, poor soil, excessive heat and voracious insects. Those which best endure these assaults will be bred from in their turn, in the hope that something valuable emerges.

A cut-down version of this approach, launching packets of seeds on satellites and returning them to Earth after a period of exposure to cosmic radiation, has had some success. China says it has conducted more than 30 such missions, and that these have yielded at least 200 improved crop varieties. StarLab Oasis's boss, Allen Herbert, believes, however, that his firm is the first private organisation set up to take this route and, in particular, actually to raise plants in space for the purpose.

Mutagenesis is not, moreover, the only facility offered by space which may be of interest to botanists. The stress responses themselves also yield useful information.

Robert Ferl and Anna-Lisa Paul are joint heads of the Space Plants Lab at the University of Florida, Gainesville, which already has experiments on board the ISS. These are studying how *Arabidopsis thaliana*, a species of cress that is botany's equivalent of animal scientists' mice and fruit flies, responds to the rigours of orbital free fall. The answer is that the plants switch on some genes which would normally remain dormant, while switching off others that would normally be active.

In particular, as Dr Ferl, Dr Paul and their colleagues have found, spacefaring specimens frequently divert resources away from tasks, such as strengthening the rigidity of cell walls, which are less pertinent when the directional pull of gravity is missing. Conversely, in a bid better to determine which way is "up", they become more sensitive to light. As Dr Paul puts it, plants "reach into their metabolic toolbox" to cope with the unusual stress. In doing so they pull out tools that may be used rarely on Earth, but which plant breeders might be able to deploy in advantageous ways by improving gas exchange, inducing better root growth or reducing stem size.

The ISS will not, though, last for ever. And Nanoracks is involved in a proposal to replace it. As the name of its progeny in Abu Dhabi also suggests, this is Starlab, a putative crewed space station planned by a group led by Lockheed Martin.

Starlab is intended to be a commercial enterprise, with plant breeding as one of its sources of revenue. It is not planned to go into orbit until 2027, and the schedule for such projects is in any case almost always optimistic. But if it does get off the ground, the idea that one of its modules might, in effect, be a plant-growing annex to the main living space, akin to a conservatory on Earth, has a pleasing domesticity to it. Perhaps the crew will relax there after a hard day's work. ■

An obituary of Edward Wilson

An inordinate fondness for ants

The world's first sociobiologist died on December 26th

ONE DAY in 1936 Edward Wilson, a budding seven-year-old naturalist, was out fishing. He hooked a pinfish, which has sharp spines down its back. He pulled too hard. As the fish came out of the water, one of its spines went into his right eye. Keen not to cut short a day outdoors, he soldiered on without going to hospital. As a result, he lost most of the sight in that eye.

This loss of vision was not the only reason he turned from vertebrates to ants. But it gave him a nudge: "I noticed butterflies and ants more than other kids did, and took an interest in them automatically." A long and productive career saw him write hundreds of papers and publish dozens of books, collect two Pulitzer prizes, and make fundamental contributions to ecology, conservation and evolutionary biology.

But it was insects in general, and ants in particular, that were his first love. He began as a muddy-booted field biologist of the old school, tramping across Australia, Fiji and New Guinea, collecting and cataloguing new species. As biology became more technical, in the wake of the discovery in 1953 of the double-helix chemical structure of DNA, he moved with the times. Recognising the need to sharpen his mathematical skills, the tenured Harvard professor enrolled himself in calculus classes alongside his own undergraduate students.

A myrmecologist's myrmecologist

As with all the best scientists, he delighted in drawing connections. Ants are biological robots, their behaviour controlled by chemicals called pheromones. (Some of Wilson's early work was in decoding these signals; learning, as he put it, to speak to another species.) But from those simple chemicals arises an astonishing variety of behaviour. Ants march in columns like Roman legionaries, practise agriculture, form living rafts to survive floods, and run complex societies in which the individual good is subservient to that of the colony.

Exploring the evolutionary principles underlying that behaviour got him thinking about how they might apply to other species, a topic he explored in 1975 in a book called "Sociobiology: The New Synthesis". The chapters that applied biological reasoning to the behaviour of other animals were uncontroversial. But when, at the end, he extended the analysis to humans he was denounced by some of his left-wing Harvard colleagues, compared to the Nazis, and physically attacked at a lecture.

Wilson's crime was not error, but heresy. Over a century and a half after Darwin's elucidation of natural selection, *Homo sapiens* remains an animal with a tendency to think itself semi-divine, or at least somehow above that sort of evolutionary messiness. Time has proved Wilson right. These days few dispute that human behaviour is at least partly shaped by genes. But while the principle is (mostly) accepted, the mechanisms remain obscure. Untangling exactly how, and how much, genes affect human behaviour remains a piece of vast and fascinating unfinished business.

The study of fossils

Digging deep

The tricky relationship between palaeontology and poor countries

WHAT YOU see depends on where you stand. The unarguable fact that most palaeontologists live in the rich world means two things. One is that the fossils of these places are far better studied than those of poorer countries, which is a scientific pity. The other is that what knowledge has been garnered about poor-country palaeontology is frequently the result of visits by rich-country palaeontologists.

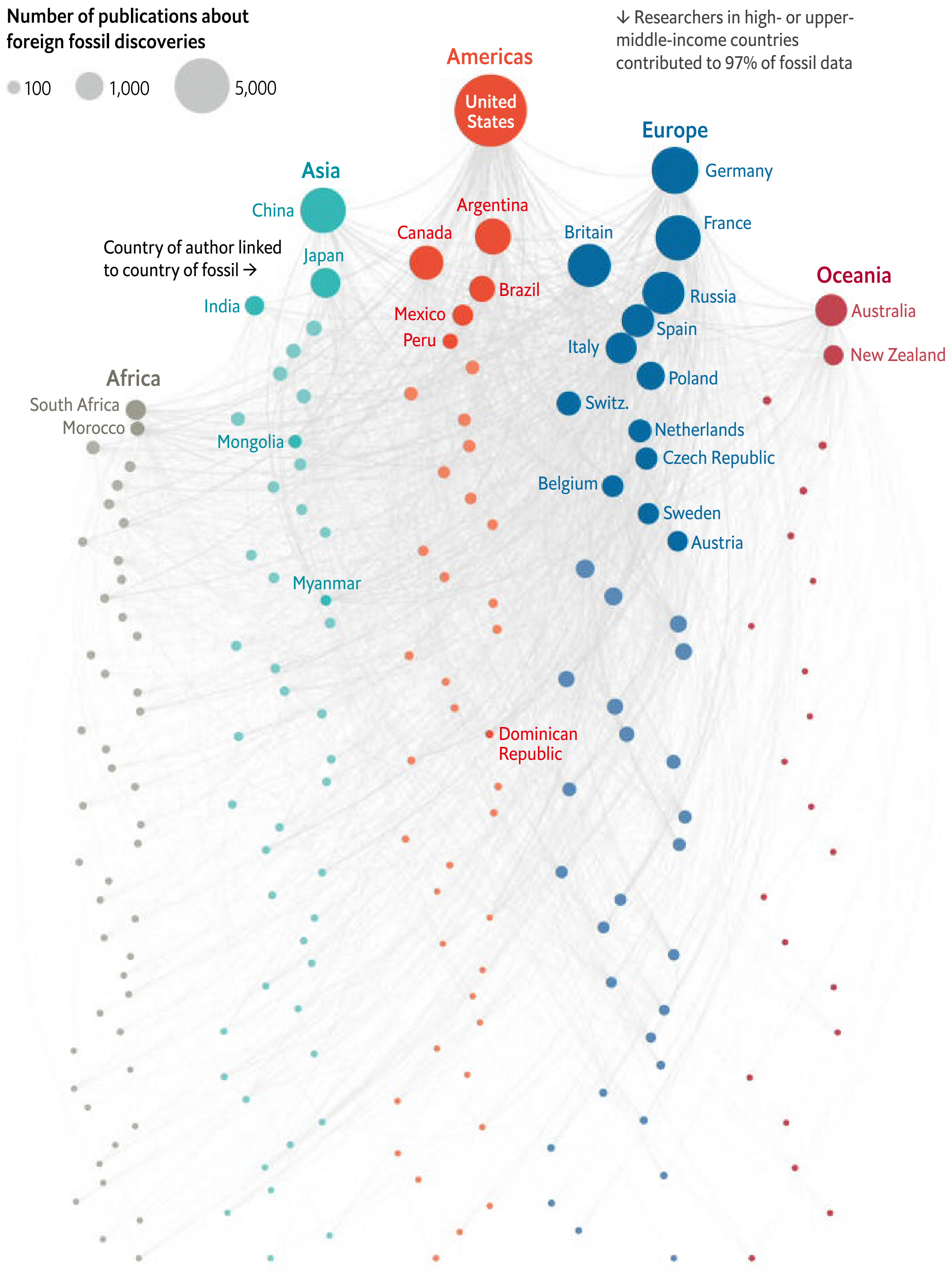
All this was well known, if not quantified, before Nussaibah Raja put numbers on it in a paper published in *Nature Ecology and Evolution*. Ms Raja, however, sees not just a regrettable history-induced bias that should certainly be addressed in future, but also a continuing pillage of poor countries by the scientific establishments of rich places more powerful than they.

Perhaps. But an alternative view is possible. This is that many of the world's poor countries have higher priorities than studying their fossils, that letting foreign researchers do it for them is not wrong, provided no laws are broken, and that it is patronising to suggest otherwise. Moreover, as Ms Raja observes, several not-yet-properly rich places, notably China, Brazil, Argentina, Mexico and India, are indeed developing as palaeontological powers in their own right. And, as she further points out, Chinese palaeontologists are starting to take an interest in neighbouring Myanmar's fossiliferous amber beds that a cynic might see as at least as predatory as that of any Western fossil hunter.

Ms Raja rightly notes that rich-country scientists could do more to assist their poor-world hosts, especially by recruiting local researchers onto their teams to transfer expertise—something they are currently bad at. But it takes two to tango. And not everywhere yet has the political will, institutional depth, or, indeed, money, to join in the dance. ■

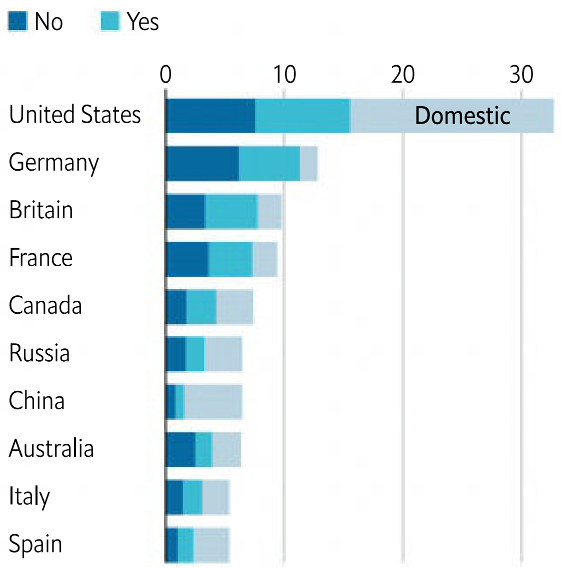
The Richard Casement internship. We invite applications for the 2022 Richard Casement internship. We are looking for a would-be journalist to spend three months of the summer working on the newspaper in London (covid-19 permitting; otherwise remotely), writing about science and technology. Applicants should compose a letter introducing themselves and an article of about 600 words that they think would be suitable for publication in the Science & technology section. The successful candidate will receive a stipend of £2,000 a month. Applications must reach us by midnight on January 28th. They should be sent to: casement2022@economist.com

→ **Fossil discoveries around the world*, 1990-2020**



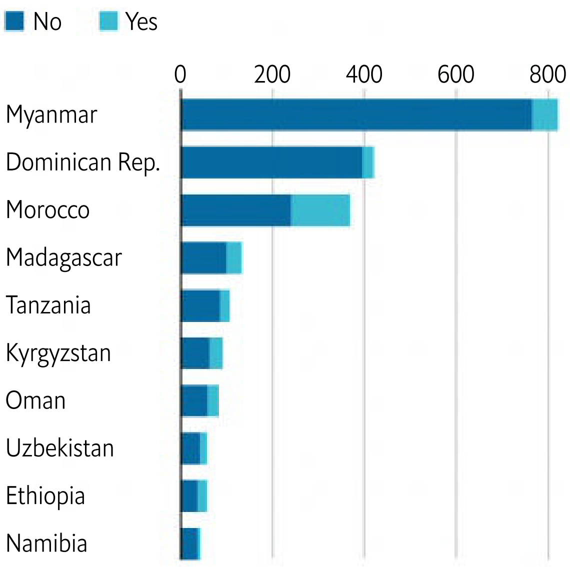
Fossils discovered, by country of researcher, %

Discoveries abroad with local collaboration



Fossils discovered, by source country

Discoveries with local collaboration



Source: *Nature Ecology & Evolution*

*Data from the Paleobiology Database (PBDB)

Polarisation and conflict

How things fall apart

An expert argues that America could have another civil war. She exaggerates

How Civil Wars Start. By Barbara Walter. *Crown; 320 pages; $27. Viking; £18.99*

IT IS HARD to overstate the danger Donald Trump poses to America and the world, but Barbara Walter manages it. Mr Trump scorns democratic norms, stirs up racial division, propagates the big lie that he won re-election in 2020, encouraged a coup attempt on January 6th 2021—and might win the presidency again in 2024. Ms Walter, a political scientist at the University of California, San Diego, rightly decries these sins. But she goes further. Thanks partly to Mr Trump, and partly to the underlying trends he has exploited, she claims America is at risk of civil war.

This far-fetched conclusion spoils an otherwise interesting book. Or rather, "How Civil Wars Start" is really two books: a well-argued one about what caused past civil conflicts around the world, and a tendentious one maintaining that the same factors may soon result in war in the United States.

The well-argued part goes something like this. Countries are most vulnerable to civil war when they are somewhere between dictatorship and liberal democracy. In a functional democracy, people have no cause to take up arms. In a full-blown dictatorship, they are likely to be locked up or killed the moment they do so. The danger zone opens up when a dictatorship gives way to a looser form of government, but the new regime has not yet found its feet. "Given a choice between democracy and dictatorship, most will gladly take democracy," Ms Walter writes. "But the *road* to democracy is a dangerous one."

A second risk factor is factionalism. Since the end of the cold war, perhaps 75% of civil wars have been fought between ethnic and religious groups, rather than political ones. Here what matters is not how diverse a country is, but whether politics revolves around identity.

Political leaders who stir up fear of another group to win support from their own are often especially dangerous. Consider (as Ms Walter does) the former Yugoslavia. As the cold war ended, it cast off communism and began to move towards democracy. It promptly fell apart, goaded by "ethnic entrepreneurs" such as Slobodan Milosevic.

He was not a true believer. A former communist, he switched to Serbian nationalism because it was the easiest way to win support. In speeches, he duly celebrated Serbia's historical greatness and "reminded listeners of past atrocities perpetrated against Serbs". His path was smoothed by his enemy, Franjo Tudjman, a Croatian bigot. The more Tudjman picked on Serbs, the more they turned to Milosevic for protection, and vice versa.

Home truths

The most effective grievance-mongers are creative liars. Serbian television, for instance, once claimed that Serb children were being fed to lions in Sarajevo Zoo. They also recognise no statute of limitations. "For five centuries they violated our mothers and sisters," said one Croat nationalist of Bosnian Muslims.

Complacent cosmopolitans did not see war coming. They lived in cities where Serbs, Croats, Muslims and others freely intermingled and intermarried. They did not imagine those groups would start killing each other. Even when they knew that Serb militias were forming in the hills, they dismissed them as yokels. One local ▸▸

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writer recalls city folk joking about rustic Serbs "hating us because we knew about soap and water...and wearing clean socks".

Another risk factor arises when a large group fears it is losing status. Ms Walter lists several that rebelled for this reason. Sunni Arabs, who dominated Iraq under Saddam Hussein, were shut out of power after he was toppled; some went on to create Islamic State. After the revolution in Kyiv in 2014, some in Ukraine who considered themselves ethnically Russian revolted against the new government (with assistance from Vladimir Putin).

The most disgruntled members of an aggrieved group may take up arms. At first they are typically too small in number to pose a serious threat—but social media can accelerate the descent into bloodshed. Ms Walter describes how the voices of Buddhist extremists were amplified after Facebook reached Myanmar in 2015. Suddenly, their warnings of the threat posed by Muslim Rohingyas found a much wider audience. The more alarming the posts, the quicker they went viral. "Just feed them to the pigs," said one. The Rohingyas suffered genocide, and Myanmar is now embroiled in a complex civil war.

All this is persuasive, and a useful guide to what is happening today in, say, Ethiopia, or might happen in Lebanon. But America? Yes, there are some parallels. The country is polarised, and cynical race-baiting politicians have made matters worse. The most egregious culprits are on the right, but some on the left have exacerbated the split by alienating white Americans: urging minorities to think of themselves first and foremost as members of a racial group, as some activists do, ultimately encourages the majority to do likewise. Many working-class whites feel a loss of status, and their grievances have been stoked on social media. There is a rural-urban divide: some educated city-dwellers disdain their rustic compatriots, who keenly resent it.

And yes, America has small but well-armed militia groups who talk of violent revolution and occasionally kill people. If Mr Trump were to return to office, moreover, he would surely degrade American democracy further. Arguably the most important thing President Joe Biden and the Democrats can do for their country is to keep hold of the White House. Amazingly, given the quality of their likely opponent, the polls say they might lose it.

These are all grave problems. But they do not portend civil conflict. Ms Walter mentions only fleetingly some of the reasons why today's America is not like the former Yugoslavia or other imploding states. No country as sophisticated, modern, liberal and democratic as contemporary America has ever descended into civil war. It has exceptionally strong, professional and apolitical armed forces. Its police, though far from perfect, uphold the law, as do its courts.

A series of politically inspired terrorist attacks is sadly plausible. So is a better-organised revolt than the one staged a year ago. But it would have no chance of success—and, on past form, the terrorists would be caught and punished. The American state cannot be overthrown by seizing a building in Washington. ■

A life in journalism

The road to Watergate

Chasing History: A Kid in the Newsroom. By Carl Bernstein. *Henry Holt; 352 pages; $29.99*

THIS ENGAGING memoir recounts how Carl Bernstein earned his chops as a young newspaperman in the years before, with Bob Woodward, he became one of the world's most renowned investigative journalists after exposing the Watergate scandal. It begins in 1960 when the 16-year-old, a far from diligent student, wangles a part-time job as a copy boy at the *Washington Star*, the capital's evening newspaper. Mr Bernstein's father, a public-sector union leader, pulls strings to get the lad an interview. Skills learned at an all-girls' typing class, and his own persistence, secure him the role. Glimpsing the organised mayhem of the newsroom, he realises that this is the industry for him.

His picture of life on the *Star* is both vivid and elegiac. He captures the frantic rhythms of a big newspaper and its multiple editions—the first published at 11am, the last after Wall Street's close—and the craft of the men and (still relatively few) women who made it all happen. When a police radio discloses that two people have been electrocuted in a swimming pool, it takes just 75 minutes for a front-page story—based on phoned-in copy from a team choreographed by Sidney Epstein, the coolly brilliant city editor—to reach the composing room to be set into type.

Phoning in the news

Epstein, who dresses like a model from *Esquire*, is one in a gallery of tremendous characters from whom the youngster learns his trade. At the opposite end of the spectrum is the paper's well-connected police reporter, Ted Crown, who looks and sounds like a warthog and is no more capable of writing a coherent newspaper article than of penning a sonnet. A crass bigot, Crown nevertheless has a kind of integrity and an "allegiance to the facts and to getting the story right", demonstrated when he suspects a police chief of framing an innocent black man.

As Mr Bernstein rises to the dizzying heights of a "dictationist", he gets opportunities to be the leg-man for senior colleagues, phoning in reports on live events such as civil-rights marches and John F. Kennedy's inauguration, which find their way into front-page stories. As well as taking copious notes on every aspect of a newsman's trade, he begins building up his list of potential sources. The feckless schoolboy is becoming a young man of determined ambition.

The cause that most animates him is the struggle for civil rights. Peaceful protests in Washington were met with police and National Guard violence; neighbouring Virginia was still governed by Jim Crow laws. Relatively conservative compared with the liberal *Washington Post*, the *Star* employed only one black journalist, but its staff were able to report on the brutalities of systematic discrimination. The most important lesson the paper taught Mr Bernstein was to spare no effort in getting the facts and then, as accurately as possible, to put them in a context that the reader could understand.

Despite his devotion to the *Star*, in the end his problematic relationship with academia catches up with him. Although now a respected general-assignment reporter, he is still nominally a student at the University of Maryland, from which he must graduate or face demotion back to the dictationist's booth. Rating his chances of graduation as zero, he departs with a colleague, who has been made editor of the much smaller *Elizabeth Daily Journal* in New Jersey. He wins three statewide journalism prizes in a year, including one for investigative reporting. That is his ticket back to a big-time newspaper—the *Post*, where Ben Bradlee is about to become the campaigning editor. Six years later, Bradlee would let Mr Bernstein and Mr Woodward follow wherever the facts of the Watergate break-in led them.

Bad commercial decisions and declining circulation—caused in part by competition from local television news and an exodus of readers to the suburbs—led to the *Star*'s demise in 1981. Many other newspapers have succumbed since, undone by the digital-media revolution and unsustainable business models. There are still great reporters in the Bernstein mould, but fewer than there were. Opinion is cheaper, news agendas are more partisan and many readers like it that way. For powerful malefactors, meanwhile, "fake news" has become a jeering, all-purpose retort. ■

Climbing literature

Tell it from the mountain

Time on Rock. By Anna Fleming.
Canongate Books; 272 pages; £16.99

LESS ICONIC than the victories of Jesse Owens at the Berlin Olympics of 1936—but no less galling to the games' Nazi hosts—were those of Günter and Hettie Dyrhenfurth, a Swiss couple who won the gold medal for alpinism. The Dyrhenfurths, who had Jewish heritage, were born in Germany and took Swiss citizenship only in 1932. They had made two expeditions to the Himalayas, in 1930 and 1934, enjoying success that contrasted markedly with the Nazis' own disastrous attempt on Nanga Parbat. Hettie, a mother of three, was 42 when she climbed all four peaks of Sia Kangri, capturing the women's altitude record, which she would continue to hold for more than 20 years. Günter pointedly refused to give the Nazi salute when accepting the medals on their behalf.

This was the last Olympic contest in alpinism; these were also the penultimate games at which another Olympic prize was awarded—for literature. Among the competitors for the award, which recognised works "inspired by the idea of sports" or dealing "directly with athletic topics", was Günter Dyrhenfurth, whose "Demon of the Himalayas" was submitted in the "epic" category. He didn't win—the prize went to a Finn, Urho Karhumaki, for a long poem about open-water swimming—but his participation in both events highlights the close and enduring relationship between climbing and writing.

"Time on Rock", a new book by Anna Fleming, is the latest to embody this close affinity. It is the story of a young woman's climbing life, from nervy teenage apprentice to lead climber in her 30s. It is also a "journey into the rock", as Ms Fleming, an academic and journalist, comes to know and love the varied terrain of the British Isles (and, in one chapter, Greece). It is about the fear and joy of climbing, and how a hobby can expand to become the centrepiece of a life. Echoing and honouring some of the classics of climbing literature, the book is a fine introduction to the genre.

Though most celebrated mountaineers have been men, many of the best books about climbing are by women. Ms Fleming pays tribute to perhaps the greatest of all mountain writers, Nan Shepherd, the Scottish author of "The Living Mountain" (written in the 1940s but not published until 1977). Part memoir, part Buddhism-inflected meditation, Shepherd's work influences both Ms Fleming's prose and her approach to mountain life. "The thing to be known grows with the knowing," Shepherd thought, a conviction reflected in Ms Fleming's attitude to the mountains she scales. "We shape the rock," she says, and "the rock shapes us".

Traces of other mountaineer-authors are visible too. One is the poet Helen Mort, whose physical, sinuous verse, full of granite and rhyolite, slabs and ledges, seems to have informed Ms Fleming's tactile engagement with the mountain world. "I think through my hands," Ms Fleming writes, grappling with the "textures and densities of rock which erode in their own characteristic style". (Ms Mort's own forthcoming memoir, "A Line Above the Sky", is an intimate take on motherhood and self-dissolution, and the way mountains can come to fill the voids of a life.)

Partly a story about being a woman climber in a world still largely dominated by men, "Time on Rock" is also a kind of phenomenological engagement with different rocks, a close looking and feeling which reveals the dazzling variety of stones that might appear from a distance to be much alike. The more time Ms Fleming spends on the faces of mountains, the more she seems to recognise that the joy of climbing is not the brief elation of the summit, but rather the "journeys across the stones". In a poised and poetic epilogue, in which she climbs Creag an Dubh Loch in the Grampians, she writes of how the "self is poured into the stone and the rock flows through the body".

Up, up and within

Out of the void

Some traditional climbing narratives are structured around triumphs or tragedies. The best of these—such as Joe Simpson's "Touching the Void", Ed Caesar's "The Moth and the Mountain" and Jon Krakauer's "Into Thin Air"—are animated by a sense of looming disaster, by the horror of the empty space below. "Time on Rock" eschews these vertiginous thrills. The nearest Ms Fleming comes to real danger is an "epic" climb up the Cuillin ridge on Skye, where she is forced to retreat, defeated, by the fall of night. Instead she uses the act of climbing, and the way that "intense vulnerability sharpens the senses", to contemplate the beauty of nature in its loftiest reaches.

In this, she looks back not only to Shepherd but to Gwen Moffat's luminous "Space Below My Feet", a hymn to the high places of Britain, as well as Robert Macfarlane's "Mountains of the Mind" and Dan Richards's "Climbing Days" (about Dorothy Pilley, a pioneering climber and wife of literary critic and fellow mountaineer I.A. Richards). All these books tread a line between nature writing and climbing literature; they both celebrate places and extremities, and show how time in the elements reveals the elemental self.

In a similar way, "Time on Rock" calls to mind Al Alvarez's "Feeding the Rat". Alvarez, who died in 2019, was best known as a poet and friend of Sylvia Plath, but he was also a committed climber. His book is a record of his friendship with the mountaineer Mo Anthoine, but it is also about the way climbing divulges hidden truths about the climber. Pretence is unsustainable on the mountainside, and the "rat" of the title—the climber's primal, essential nature—takes over. As Ms Fleming puts it, "the animal within stirs". On the rock face, "the veneer is stripped away and you can see the heart and mettle of a person".

Climbing's exposure of character helps make it a fertile subject for literature. Ms Fleming's book, like many of the genre's best, is devoid of braggadocio. Instead it goes deep into the mountain landscape—and the minds of those who choose to spend their lives on rock. ■

Performance art

The eyeballs have it

LOS ANGELES

After 50 years, an anonymous cult art-pop group is still on the road

In May 2020, shortly after the coronavirus struck, America's weirdest rock band reissued one of its hits. The new video for "Die! Die! Die!", a shrieking, nihilistic number re-recorded with the front man from the Pixies, featured tumbling viruses and a blond effigy of Donald Trump mouthing "I want you to die, die like a stranger…like a rat." The caustic chanting and surreal graphics were a biting reminder that the cult phenomenon known as the Residents remains as subversive and strange as ever, half a century after the group was founded.

At a gig in Los Angeles that kicked off the 50th-anniversary tour, diehard fans bedecked in Residents merchandise howled their approval. The performers were swathed in fabric imprinted with hundreds of eyeballs, their signature image. Their anonymity, guarded by eyeball-themed masks, has been key to their success. Of the four young men from Louisiana in the original line-up, two dropped out in the 1980s, whereupon the group became a revolving collective with two main leads, the "Singing Resident" and the "Musical Resident". Hardy Fox, one of the last original members and the main composer, outed himself before he died in 2018. The current four carry on behind their disguises, as fans go along with a wink.

But the band's improbable longevity is also "a triumph of perseverance over talent, which they never believed in anyway", says Homer Flynn, the group's spokesman and co-owner of its marketing arm, the Cryptic Corporation. "It's not like the Residents were ever very good musicians." Unlike most bands from the heyday of rock, they don't just trot out golden oldies, but incessantly create new material and repurpose old songs. The ongoing 50th-anniversary concerts reprise the character of Dyin' Dog, a Southern blues singer possibly of their own invention.

The masks safeguard their creative freedom as well as their identities. From the moment the original quartet mounted their first guerrilla raid on a folk-music club in San Francisco in October 1971, they understood that performing anonymously "gave them a lot more space underneath to be whoever they wanted, or do whatever they wanted", says Mr Flynn. An early attempt at a record deal failed when their demo tape was sent back by a Warner Brothers scout, addressed to "Residents". It was the perfect moniker for a group based on what they call "the theory of obscurity".

Their lyrics are wilfully impenetrable, the music a barrage of sound. To admirers, part of the appeal is "trying to figure out what they're saying", allows one 30-something concertgoer in LA. Covid-19 aside, their dyspeptic commentaries are rarely overtly political. Their entertaining half-century of narrative games include an elaborate tale of underground mole people, gruesome takes on fairy tales and Bible stories, and discordant covers of songs by artists from James Brown to the Beatles and the Rolling Stones.

The fanbase is impressively wide: more than 100,000 people follow their Facebook page. Long before he created "The Simpsons", Matt Groening extolled the group as "the most significant pop-music ensemble of the 20th century". And for a west-coast underground sensation, their tentacles reach surprisingly far—many male baby-boomers in America, Europe and Australia own a Residents disc. Much to their gratification, fans emerge in each new generation. "There will always be people who aren't really interested in what the mass market is trying to shove down their throats," says Mr Flynn.

Naturally, the internet has helped. But it is the Residents' own grasp of evolving technology that has made them the innovators they are. Experimenting with the first multichannel recorders, advanced synthesisers and sampling technologies allowed them to create an overdubbed sound that they could take on the road. Four-track, 8-track, CDs, DVDs, Midi—the group has surfed each successive wave. The latest is retro: Cherry Red Records in London is issuing vinyl sets of newly remastered tapes and unreleased material.

Mr Flynn formed a graphic-design firm to help the Residents with film-making, often using elaborate sets. By the 1980s, he says, they were pioneers of music video and a fixture on the new cable channel MTV. "Technology evolves faster than culture," he observes. "So there's a gap, a place where they could experiment." The "Commercial Album" of 1980 was made up of 40 one-minute songs, some later turned into 60-second films: TikTok before TikTok. One such film, "The Act of Being Polite", is now the group's first NFT (non-fungible token), minted last autumn and auctioned in a fund-raiser for the Burning Man festival.

This faceless art collective masquerading as a rock band, with its mad theatrical performances, attracts oddballs and outsiders across the globe. After over 60 albums, innumerable videos and an "Ultimate Box Set" housed in a refrigerator at the Museum of Modern Art in New York, the cast is glad to be earning a living. Whatever comes next, they are sure to stay ahead of the curve—and in disguise.

On the "Wonder of Weird" tour of 2013, the "Singing Resident" rasped these lines:

> We have left our lives/We have left our land
> We have left behind/All we understand
> Now we must cry out/As we make our stand
> We will die/Pretending to be a band. ■

Economic & financial indicators

Economic data

	Gross domestic product				Consumer prices			Unemployment rate		Current-account balance	Budget balance	Interest rates			Currency units	
	% change on year ago latest		quarter*	2022†	% change on year ago latest		2022†	%		% of GDP, 2022†	% of GDP, 2022†	10-yr gov't bonds latest,%		change on year ago, bp	per $ Jan 5th	% change on year ago
United States	4.9	Q3	2.3	3.8	6.8	Nov	4.3	4.2	Nov	-3.7	-7.8	1.7		75.0	-	
China	4.9	Q3	0.8	5.3	2.3	Nov	2.3	5.0	Nov‡§	2.3	-4.7	2.6	§§	-35.0	6.37	1.4
Japan	1.2	Q3	-3.6	3.2	0.6	Nov	1.3	2.8	Nov	3.4	-7.2	nil		-8.0	116	-11.2
Britain	6.8	Q3	4.3	3.6	5.1	Nov	4.5	4.2	Sep††	-2.6	-6.7	1.0		76.0	0.74	nil
Canada	4.0	Q3	5.4	3.5	4.7	Nov	2.8	6.0	Nov	-0.4	-7.5	1.6		94.0	1.27	nil
Euro area	3.9	Q3	9.1	3.9	4.9	Nov	2.6	7.3	Oct	3.1	-4.2	-0.1		46.0	0.88	-8.0
Austria	5.7	Q3	14.6	4.1	4.3	Nov	2.5	5.8	Oct	2.2	-3.5	0.1		57.0	0.88	-8.0
Belgium	4.9	Q3	8.4	3.3	5.7	Dec	2.2	6.3	Oct	0.6	-4.3	0.2		60.0	0.88	-8.0
France	3.3	Q3	12.6	4.1	2.8	Dec	2.0	7.6	Oct	-1.2	-5.5	0.2		57.0	0.88	-8.0
Germany	2.6	Q3	6.9	3.3	5.2	Nov	3.5	3.3	Oct	6.5	-2.7	-0.1		46.0	0.88	-8.0
Greece	13.7	Q3	11.3	4.5	4.8	Nov	2.4	12.9	Oct	-4.3	-4.4	1.4		76.0	0.88	-8.0
Italy	3.9	Q3	11.0	4.4	3.9	Dec	1.8	9.4	Oct	3.5	-5.7	1.3		71.0	0.88	-8.0
Netherlands	5.2	Q3	8.7	2.9	5.2	Nov	3.8	2.7	Nov	8.6	-3.9	-0.2		36.0	0.88	-8.0
Spain	3.4	Q3	10.9	5.1	6.7	Dec	2.4	14.5	Oct	1.4	-5.2	0.6		54.0	0.88	-8.0
Czech Republic	2.8	Q3	6.1	4.7	6.0	Nov	4.8	2.6	Oct‡	2.0	-5.3	3.0		172	21.7	-1.8
Denmark	3.7	Q3	4.3	3.0	3.4	Nov	1.6	3.1	Oct	8.5	-0.2	0.1		58.0	6.56	-7.6
Norway	5.1	Q3	16.1	3.4	5.1	Nov	3.0	3.6	Oct‡‡	8.5	0.2	1.4		76.0	8.80	-3.3
Poland	5.5	Q3	9.5	4.9	7.8	Nov	4.8	5.4	Nov§	0.8	-3.1	3.9		265	4.03	-8.4
Russia	4.3	Q3	na	2.4	8.4	Dec	4.9	4.3	Nov§	6.3	0.2	8.3		212	75.7	-2.1
Sweden	4.5	Q3	8.2	2.9	3.3	Nov	2.0	7.5	Nov§	4.2	-0.8	0.3		31.0	9.06	-9.4
Switzerland	4.1	Q3	6.8	3.0	1.5	Dec	0.9	2.5	Nov	5.6	0.1	-0.1		51.0	0.92	-4.3
Turkey	7.4	Q3	11.3	3.7	36.1	Dec	20.7	10.7	Oct§	-1.9	-3.3	22.6		983	13.6	-45.7
Australia	3.9	Q3	-7.5	3.1	3.0	Q3	2.7	4.6	Nov	1.9	-4.5	1.8		82.0	1.38	-6.5
Hong Kong	5.4	Q3	0.5	3.0	1.9	Nov	2.0	4.1	Nov‡‡	1.2	-1.0	1.6		82.0	7.79	-0.5
India	8.4	Q3	54.1	7.0	4.9	Nov	4.6	7.9	Dec	-1.6	-5.9	6.5		66.0	74.4	-1.6
Indonesia	3.5	Q3	na	5.3	1.9	Dec	3.5	6.5	Q3§	-0.5	-4.9	6.3		39.0	14,358	-3.1
Malaysia	-4.5	Q3	na	4.5	3.3	Nov	2.8	4.3	Oct§	3.3	-6.2	3.6		104	4.19	-4.1
Pakistan	4.7	2021**	na	3.3	12.3	Dec	7.1	6.9	2019	-5.3	-6.2	11.5	†††	163	177	-9.3
Philippines	7.1	Q3	16.1	5.3	3.6	Dec	3.8	7.4	Q4§	-2.7	-7.2	4.8		183	50.9	-5.6
Singapore	5.9	Q4	10.7	3.8	3.9	Nov	2.2	2.6	Q3	17.6	-2.0	1.7		84.0	1.35	-2.2
South Korea	4.0	Q3	1.3	2.8	3.7	Dec	1.9	2.6	Nov§	4.2	-2.7	2.4		69.0	1,197	-9.1
Taiwan	3.7	Q3	1.1	3.3	2.8	Nov	2.4	3.7	Nov	14.2	-0.7	0.8		49.0	27.6	1.3
Thailand	-0.3	Q3	-4.2	2.8	2.2	Dec	1.7	1.5	Dec§	1.8	-6.8	1.8		67.0	33.2	-9.8
Argentina	11.9	Q3	17.3	2.3	51.2	Nov	49.7	8.2	Q3§	1.3	-3.2	na		na	103	-17.8
Brazil	4.0	Q3	-0.4	0.7	10.7	Nov	7.7	12.1	Oct§‡‡	-0.7	-7.2	11.3		446	5.66	-6.2
Chile	17.2	Q3	21.0	3.0	6.7	Nov	5.6	7.5	Nov§‡‡	-2.2	-4.5	5.8		316	836	-16.3
Colombia	12.9	Q3	24.9	5.0	5.6	Dec	4.2	10.8	Nov§	-4.9	-6.5	8.4		367	4,045	-15.1
Mexico	4.5	Q3	-1.7	2.9	7.4	Nov	4.6	3.8	Nov	0.8	-3.4	7.8		259	20.4	-2.4
Peru	11.4	Q3	15.0	3.3	6.4	Dec	4.4	8.6	Nov§	-3.0	-3.8	5.9		243	3.94	-7.9
Egypt	9.8	Q3	na	5.0	5.5	Nov	6.3	7.5	Q3§	-4.2	-6.9	na		na	15.7	-0.1
Israel	4.4	Q3	2.5	4.3	2.4	Nov	2.8	4.5	Nov	4.8	-3.2	1.0		23.0	3.10	3.2
Saudi Arabia	-4.1	2020	na	4.5	1.1	Nov	2.0	6.6	Q3	4.5	1.4	na		na	3.76	-0.3
South Africa	2.9	Q3	-5.8	2.1	5.5	Nov	4.7	34.9	Q3§	-0.3	-6.3	9.4		70.0	15.7	-4.6

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Jan 5th	% change on: one week	% change on: Dec 31st 2020
United States S&P 500	4,700.6	-1.9	25.1
United States NAScomp	15,100.2	-4.2	17.2
China Shanghai Comp	3,595.2	-0.1	3.5
China Shenzhen Comp	2,483.7	-0.4	6.6
Japan Nikkei 225	29,332.2	1.5	6.9
Japan Topix	2,039.3	2.0	13.0
Britain FTSE 100	7,516.9	1.3	16.4
Canada S&P TSX	21,039.7	-1.4	20.7
Euro area EURO STOXX 50	4,392.1	2.5	23.6
France CAC 40	7,376.4	3.0	32.9
Germany DAX*	16,271.8	2.6	18.6
Italy FTSE/MIB	28,162.7	3.0	26.7
Netherlands AEX	800.8	0.6	28.2
Spain IBEX 35	8,790.8	1.4	8.9
Poland WIG	70,751.0	2.3	24.1
Russia RTS, $ terms	1,586.2	-0.2	14.3
Switzerland SMI	12,906.4	-0.2	20.6
Turkey BIST	2,005.3	5.8	35.8
Australia All Ord.	7,899.6	0.8	15.3
Hong Kong Hang Seng	22,907.3	-0.8	-15.9
India BSE	60,223.2	4.2	26.1
Indonesia IDX	6,662.3	0.9	11.4
Malaysia KLSE	1,548.0	0.2	-4.9

	index Jan 5th	% change on: one week	% change on: Dec 31st 2020
Pakistan KSE	45,407.9	2.6	3.8
Singapore STI	3,163.4	0.8	11.2
South Korea KOSPI	2,954.0	-1.3	2.8
Taiwan TWI	18,500.0	1.4	25.6
Thailand SET	1,676.8	1.4	15.7
Argentina MERV	83,835.8	-0.2	63.7
Brazil BVSP	101,005.6	-3.0	-15.1
Mexico IPC	53,024.2	0.5	20.3
Egypt EGX 30	12,043.4	1.2	11.0
Israel TA-125	2,105.5	2.8	34.3
Saudi Arabia Tadawul	11,453.1	2.3	31.8
South Africa JSE AS	75,060.9	2.5	26.3
World, dev'd MSCI	3,203.0	-1.3	19.1
Emerging markets MSCI	1,222.7	0.4	-5.3

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2020
Investment grade	117	136
High-yield	324	429

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

The Economist commodity-price index

2015=100	Dec 28th	Jan 4th*	% change on month	% change on year
Dollar Index				
All Items	162.4	163.2	4.9	3.1
Food	140.1	140.8	3.5	15.0
Industrials				
All	183.2	184.2	5.9	-4.0
Non-food agriculturals	163.5	164.8	7.1	26.9
Metals	189.0	190.0	5.6	-9.6
Sterling Index				
All items	184.6	183.8	2.4	3.4
Euro Index				
All items	159.4	160.1	4.3	11.9
Gold				
$ per oz	1,809.9	1,814.0	1.7	-6.8
Brent				
$ per barrel	76.0	80.1	6.1	49.2

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit
Economist.com/indicators

Stoppage time

Even for elite athletes, the effects of the virus linger

"AFTER FIVE minutes of movement I had to stop because I was struggling to breathe," explained Paulo Dybala in March 2020. It was a common experience of covid-19 relayed by a very uncommon man. Mr Dybala is a star forward for Juventus, a leading Italian football team, whose athleticism fetches more than $10m a year.

Fortunately for Mr Dybala, the postponement of football matches until June 2020 left him enough time to recover. But for other players at the highest echelons of the sport, even three months may not have been long enough.

That is according to recent research by three economists—Kai Fischer and W. Benedikt Schmal of Heinrich Heine University as well as J. James Reade of the University of Reading. With some detective work, they were able to identify 90% of the 257 positive cases reported by the German Bundesliga and Italian Serie A through to July 2021 (the announcements are sometimes anonymised). They then combined this register with detailed data from Opta, a sports-data firm, on performance measures like minutes played, distance run and passes completed.

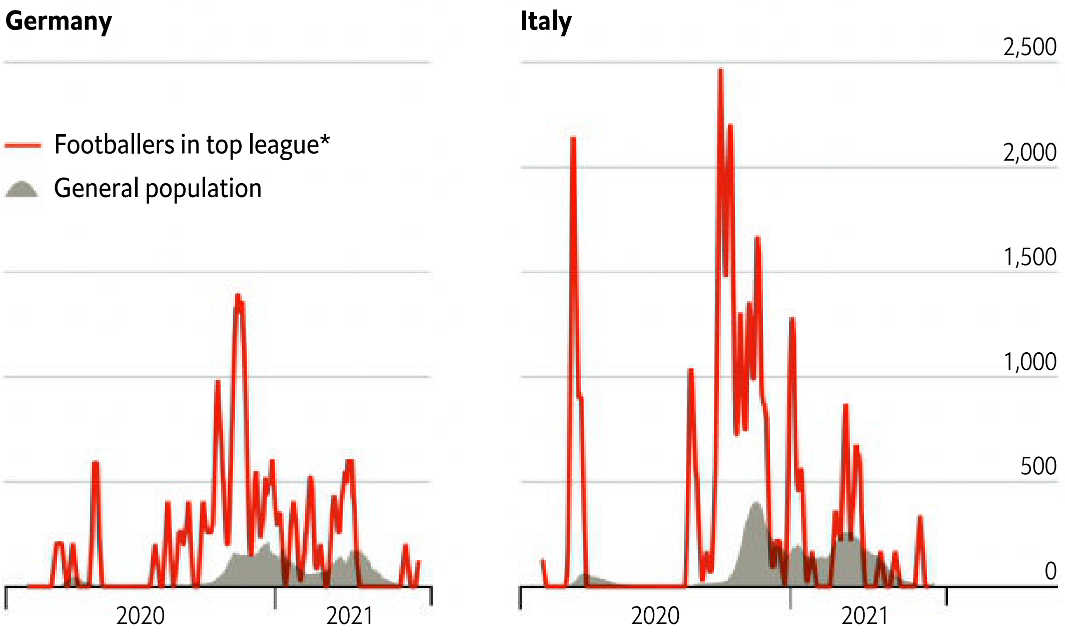
If relative performance between infected and uninfected players was stable before contracting covid, but declines after, this should indicate the lingering effects of the virus. Using this statistical methodology (called "difference-in-differences"), the authors detected a decline of 9% in minutes played. Passes completed fell by 6% and did not return to normal for months.

The Economist found a similar pattern when we replicated the analysis using a more sophisticated player-value score (a composite of more than 40 on-field activities) provided by the Twenty First Group, a sports-intelligence consultancy. In the ten weeks after infection there was an average drop in score of 0.14 standard deviations (equivalent to the median player dropping to the 30th percentile). But after ten weeks these reverted to normal, suggesting that players may compensate for passing less and spending less time on the pitch.

The odds of recovery from covid are stacked in favour of footballers, who are young, fit and able to get world-class medical care. The incentives to recover fully are much greater than for the ordinary citizen. Research on long covid is still progressing. But the fact that it may linger even in the professional game is a worrying sign. ■

→ Owing to strict testing, covid-19 was detected among players at high rates

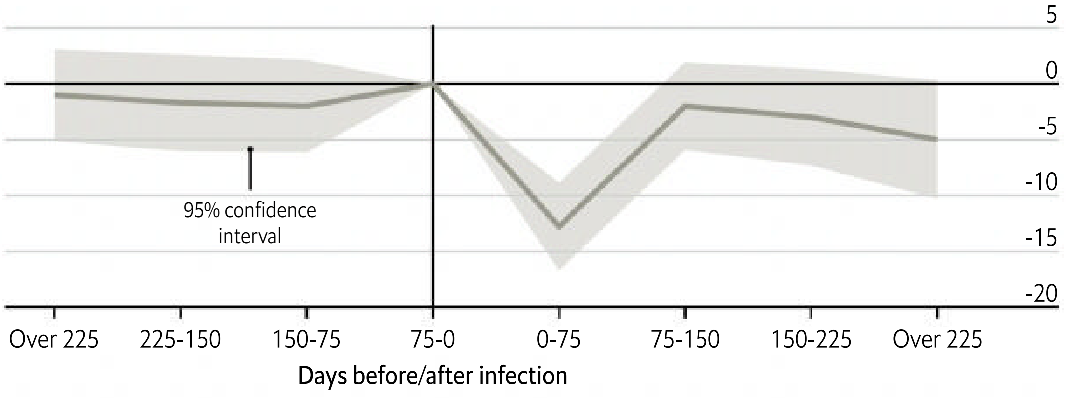
Confirmed covid-19 cases per 100,000 people, to July 2021



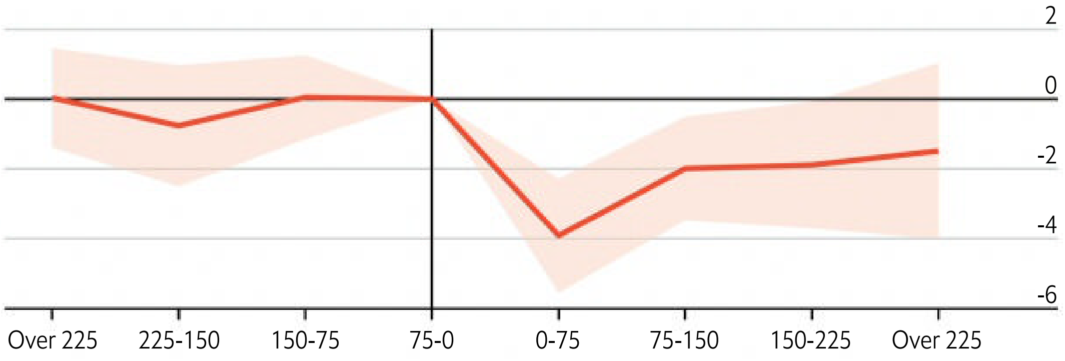
→ Covid-19 affected players' time on pitch and pass performance months later

Relative to players who didn't test positive for covid-19

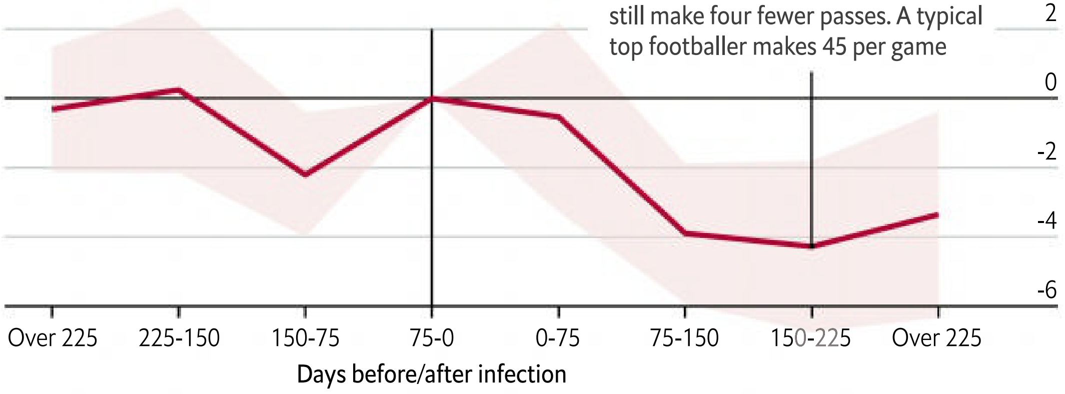
Likelihood of playing, percentage-point change



Number of minutes played per game



Number of passes completed per 90 minutes



Five months after infection, players still make four fewer passes. A typical top footballer makes 45 per game

Source: "The long shadow of an infection: Covid-19 and performance at work", by Kai Fischer, J. James Reade and W. Benedikt Schmal, working paper, 2021

*Seven-day moving average

Shame and champagne

April Ashley, Britain's first transgender activist, died on December 27th, aged 86

In the lobby of a hotel in Casablanca in May 1960, a new guest checked in. Blue-black hair, rakish fedora: George Jamieson, as his passport declared him, made quite an impression on the concierge. He frankly astonished him when he appeared later, shimmering and graceful, in a Givenchy dress.

Only the face was the same, and it was beautiful. The eyes were like a fawn's, and the smoothly glowing skin had clearly never felt a razor. Yet that face had been mocked by schoolboys who beat up the delicate classmate they could not understand, and convulsed with electric shocks by psychiatrists until the eyeballs bled. That head had been banged on the floor in fury by a mother from the Liverpool slums who detested her strange child, and punched by a father who thought boxing lessons might help. They did not help when a crowd of blind-drunk Scotsmen, fellow crew-members in the Merchant Navy, tried to drag everything off the sweet cabin-boy to see what was underneath. Nothing helped, or possibly could, as long as the name on the birth certificate was George Jamieson and the equipment below George's waist proclaimed that this was a man.

Now, in Casablanca, surgery would be done to complete the woman. It cost thousands of pounds, every penny saved up from working as a drag dancer called Toni at Le Carrousel in Paris. The doctor had warned that the chances of survival were 50/50, but Toni did not hesitate for a minute. If the surgery failed, there was no point to life anyway.

She had felt she was female from the moment she started to think. Kneeling beside her bed at night, she had prayed to wake up as a girl. The prayer went unheard, and there was no one else to ask. The family were ashamed of her, so she became ashamed of herself, trying to fit into the rough world of men. It was hard. Twice in the Merchant Navy she took too many pills, but still not enough; once she was fished from the mucky Mersey. The psychiatrists told her to go away and be gay, but she insisted she was not: she was a heterosexual woman. Nor was she trapped in a man's body, because she felt that her body, save that one part, was a woman's too. She had made it rounder and softer by taking black-market oestrogen in Paris; her breasts grew with nipples of pale, pale pink, which she then flattened brutally against her chest by wearing vests that were too small.

Now, after the operation, she could be who she always felt she was. She woke to hear the words "Bonjour, Mademoiselle", and as soon as recovery allowed she plunged into life as a lovely, fascinating woman. Already at Le Carrousel she had drawn celebrity fans, from Picasso and Dalí, who were too lecherous, to Elvis, who could not stop dancing with her. Now, secure in her gender as she thought, with April Ashley on her passport and driving licence, her face was photographed by David Bailey and Lord Lichfield and on the pages of *Vogue*. Omar Sharif slept with her, and Peter O'Toole certainly thought about it. The champagne started to flow then, and she seldom appeared in the tabloids, which also loved her, without a flute in her hand and triumph on her face.

Yet now she was hiding in a different way; hiding that she had ever been a man. To her this was not a lie, since she never had been. To Britons at that time, it was a scandal. In less than a year a supposed friend sold her story for £5 to the *Sunday People*, and her modelling career was finished. She was now a celebrity freak, a persona as strange as that place between genders where she had lived before. With friends she sparkled, but perfect strangers would pull her hair and poke her breasts to see if they were real. In well-mannered Sloane Square a woman slapped her, and the fingermarks stayed for days. Her marriage in 1963 to the transvestite son of a peer lasted a fortnight, but dragged on for seven years before they divorced. The judge's ruling was utterly humiliating: her marriage was null and void because she was "a person of the male sex", and someone born that way could never change.

On one level, she was devastated. She eventually fled London for quiet Herefordshire, then for California. There were breakdowns and bankruptcy, and for a while the drinking became an obsession. On another level, trauma turned her into a fighter. Not long after the judge's verdict she defended herself passionately across three pages of the *Sunday Mirror*. She was not a monster, but a flesh and blood woman. She always had been. And, to satisfy the prurient, she made love like a woman too. She had lost her virginity on Bastille Day high above the Place Pigalle, while the cars wildly tooted their horns. When she fled from her husband it was with the heir to the Duque del Infantado to his palace in Seville, where they made love under the Velázquezes. Both occasions were wonderful; so there. She was simply a human being living her life; but now she was publicly declared an illegal creature, again without an identity and without the protection of the law.

She did not have it until 2005, and the passing of the Gender Recognition Act. At that point, her birth certificate at last confirmed who she felt she was. In the meantime she became an impeccably elegant agony aunt and public spokeswoman for thousands of despairing people. She did not proselytise for trans life, or for the operation; she knew too many people for whom surgery had been a terrible mistake. Instead she focused her energy on winning the right to correct legal documents after transitioning: to become one's true self in the eyes of the state.

Beyond that she counselled kindness, not that she had seen much of it herself. She advised courage, "because you're bloody well going to need it". And she counselled beauty inside, which would lead to beauty outside, no matter how disconcerting some people might think it was.

All along she delighted in champagne, and not, she would tell sommeliers, a normal glass of it; an *April Ashley* glass of it. She had woken up from the operation happier than she had ever been, and had sensed a tingle of joy on waking every single day since. Despite all the pain, hers was a life worth celebrating. ■

CSC:Miami

Content Supply Chains must be forensic in their detail.

Television broadcasters have long relied on instinct, market knowledge and spreadsheets to forecast TV viewership - but instinct needs to partner with information; market knowledge is never enough; and spreadsheets are no way to excel.

As witness to these challenges, Fractal undertook its own detective work.

By combining AI, data engineering and user-centric design, Fractal created an industry-first TV forecasting system for Europe's leading media and entertainment company. The result? Up to 30% improvement in forecast accuracy.

Fractal: perfectly targeted and timed TV, no drama.

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TOWARDS A DREAM
LOUIS VUITTON